BRITAIN'S BEST SELLING MAGAZINE
FOR THE AMSTRAD CPC 464 ● 664 ● 6128

ISSUE 51 ● DECEMBER 1989 ● £1.45

NOT an official Amstrad publication!

AMSTRAD ACTION

FROM FUTURE PUBLISHING COMES THE MAGAZINE THAT LEADS THE FIELD

TOO HOT TO HANDLE?

Not one mega release but TWO. Are you really ready for this..?

POWER DRIFT – *Ouch!*
BATMAN – *Pow!*



PLUS

- PC Show – the last and the best?
- Nirvana – programmers' heaven
- RSX-Lib – machine code made friendly
- Sprites Alive – extended BASIC for gamesters
- Video Effects – part I of an ongoing series
- All the regular news, reviews, hints, tips

OPERATION THUNDERBOLT

BLOCKBUSTER FOLLOW-UP TO LAST CHRISTMAS'S No. 1 HIT... OPERATION WOLF...

NOW WITH TWICE THE ACTION, TWICE THE FUN, TWICE THE CHALLENGE

ROY ADAMS IS BACK!

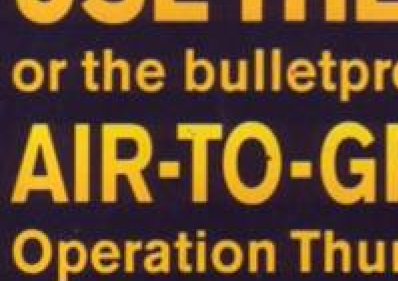
The Hi-jack report came from a DC10 leaving Paris for Boston – Arab guerillas were in control of flight 102 and had turned the aircraft towards Africa ... The plane lands in hostile territory and the terrorists begin their demands ...

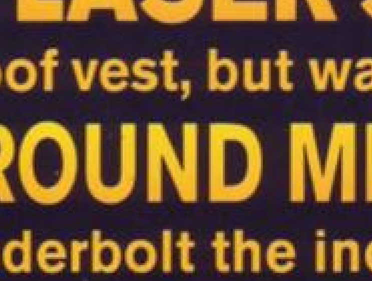
USE THE LASER SIGHT,

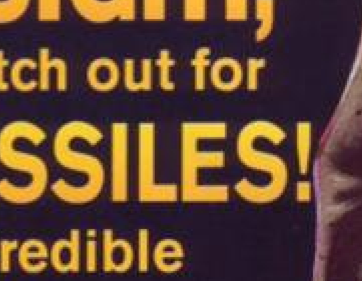
or the bulletproof vest, but watch out for

AIR-TO-GROUND MISSILES!

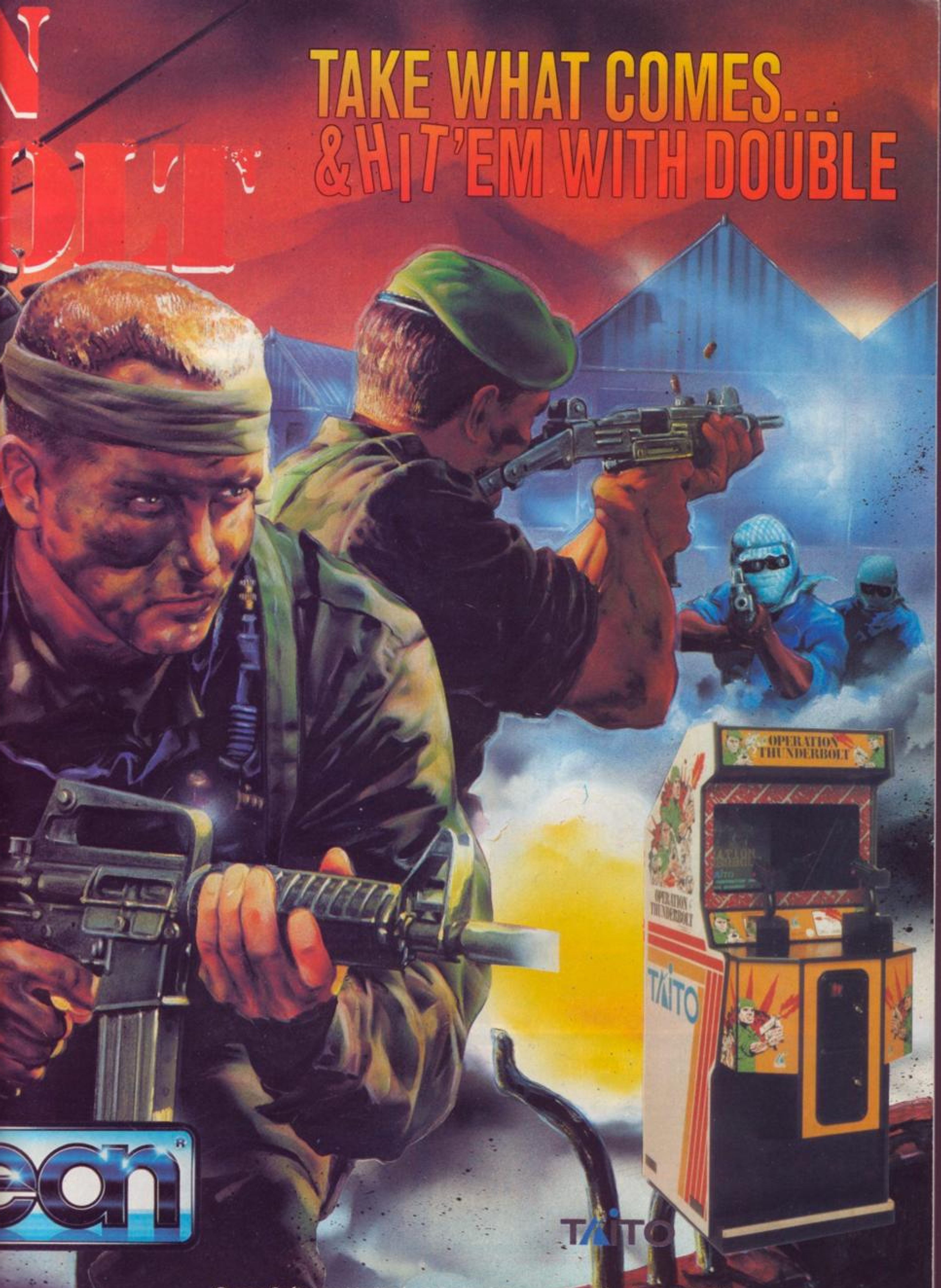
Operation Thunderbolt the incredible Taito coin-op conversion brought NOW to your home computer.







SPECTRUM AMSTRAD	SPECTRUM AMSTRAD	ATARI ST	CBM AMIGA
£9.99	£14.99	£19.99	£24.99
COMMODORE CASSETTE	COMMODORE DISK		


TAKE WHAT COMES...
& HIT'EM WITH DOUBLE
OPERATION THUNDERBOLT
OPERATION THUNDERBOLT
TAITO
TAITO

THE LINE UP

AMSTRAD ACTION ● DECEMBER 1989

FRONT END

NEWS●LETTERS



SERIOUS SIDE

CPC USES●HARDWARE●PROGRAMMING



THE ACTION BEGINS ON 47!

THE VERY BEST IN CPC ENTERTAINMENT

RAVE!

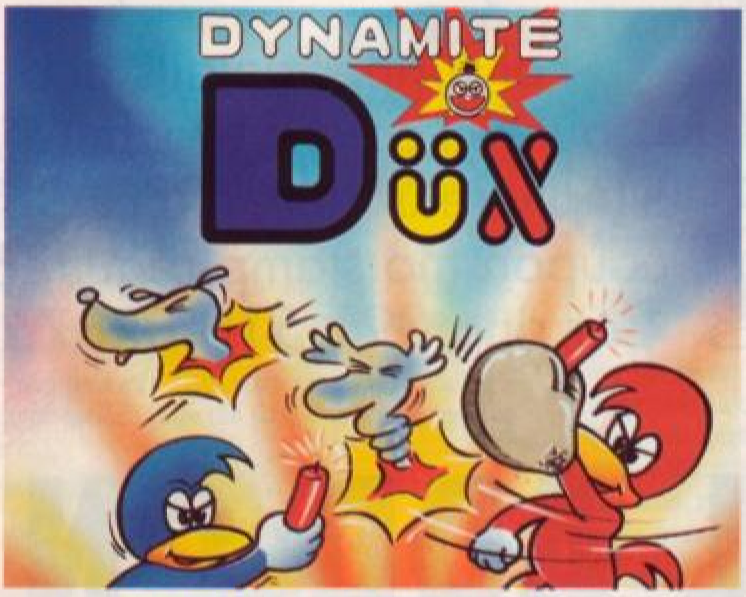


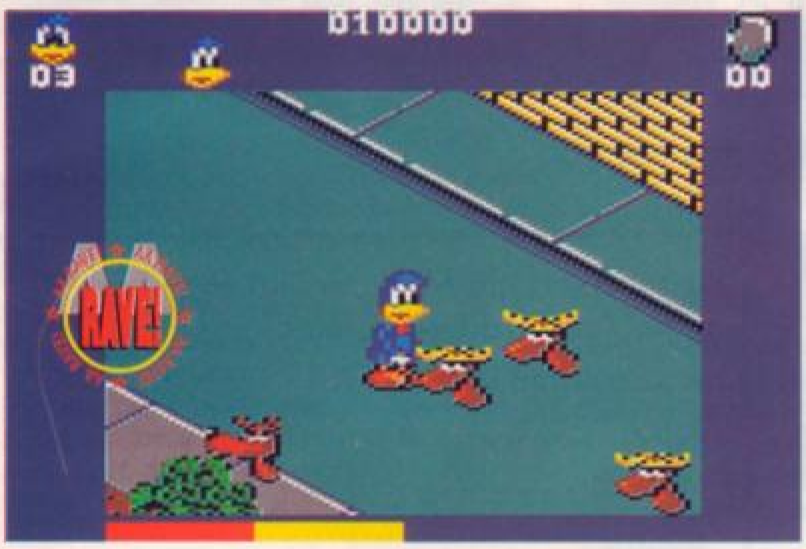


Future Publishing Limited
4 Queen Street, Bath BA1 1EJ

☎ 0225 446034 ● **Fax** 0225 446019 ● **Editor** Rod Lawton ● **Technical editor** Adam Waring ● **Games editor** Trenton Webb ● **Art editor** Ollie Alderton ● **Additional design** Paul Morgan ● **Contributors** Emma Broadley, Phil Howard, Stuart Whyte, Peter Ceresole, Tom Osmond, Adam Peters, Michael Gledhill, Conrad Bessant ● **Photography** Stuart Baynes ● **Publisher** Greg Ingham ● **Production** Fiona Milne ● **Subscriptions** Christine Stacey ☎ 0458 74011 ● **Mail Order** Clare Bates ☎ 0458 74011 ● **Advertisements** Elaine Brooks ☎ 0225 446034 ● **Distribution** Comag

ABC
MEMBER OF THE AUDIT BUREAU OF CIRCULATIONS
35,189
January-June 1989







New faces

Wot, no Steve Carey? Indeed not. Steve has moved on to pastures new (AA's sister magazine *ST Format*, to be exact), and his cheery visage will greet you no more. (Hankies out, ladies...)

In his long stint as *Amstrad Action*'s editor, Steve ensured the magazine's position as the undisputed no. 1 in the CPC world. His will be a hard act to follow, but we already have plans for making *AA* even better at a time when the CPC itself is going from strength to strength. Amstrad's machine is the best 8-bit micro you can buy, and we aim to make sure that *Amstrad Action* is the best magazine you can buy for it.

But don't worry that staff changes are going to upset the balance of your favourite magazine. Far from it. The most important thing in *Amstrad Action* is not the people who write it, but is instead – and will always be – its readers. You. And that's one thing that's *not* going to change.





AMSCENE

releases... updates... previews... new releases... updates... previews... new

THE CPC GOES ON

● Amstrad squashes rumours

Amstrad has responded hotly to rumours in the press suggesting that the company is about to drop the CPC range.

Malcolm Miller, Amstrad's Sales and Marketing Director told *AA* that "The CPC market is very healthy. Of course we haven't ceased manufacturing it – we'll be selling it for a long time yet. " He went on, "We're continuing to manufacture the CPC – that's all there is to it."



● Miller: CPC future assured.

And part of the current CPC sales drive is the inclusion of a free colour TV with its latest CPC bundle! Sounds too good to be true? Well, not really. With each colour 6128 sold, Amstrad is now giving away a free TV tuner. Simply plug this gadget into your monitor and you've got yourself a colour telly!

The price of the bundle is £399, and with it you also get a joystick and 17 free games. *Monopoly, Scalextric, Cluedo, Trivial Pursuit* and *Scrabble* are just a few.



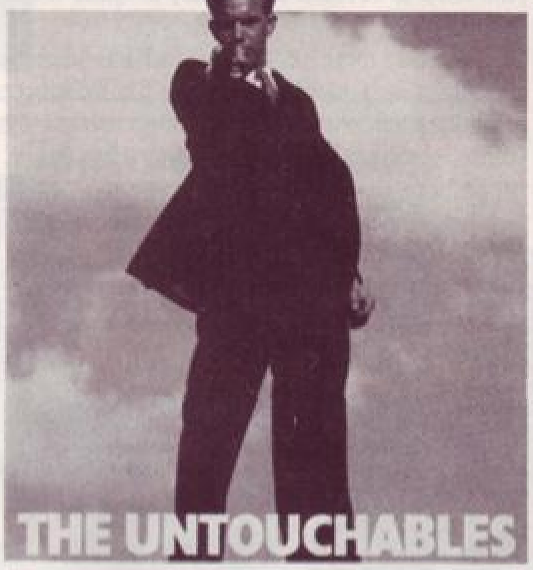
● Amstrad's CPC6128: now comes with free TV tuner.

Profits of doom...

Amstrad has just released preliminary results for the year ending 30th June 1989 – and pretty depressing reading they make.

Turnover was virtually unchanged compared to the year before, at £626 million, but profits before tax were down from £160 million to £77 million. The official line is that last year's DRAM price rises were one of the prime causes of the company's "margin erosion", but other factors which can't have helped include a vastly premature ad campaign for the PC2000 series and the recall of thousands of PCs with hard disk controller faults.

● With all the furore surrounding Amstrad's PC ranges, the company's Z80-based PCW and CPC just keep on going. Maybe there's a lesson for Amstrad in there somewhere...



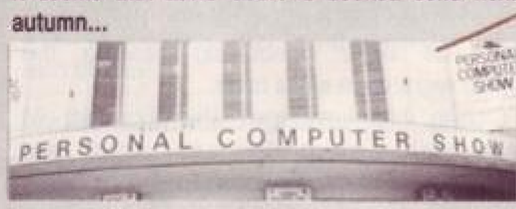
Next month:* The Untouchables *on the* AA *Christmas covertape! Oh, you lucky, lucky people...

SHOW OFF!

PC Show organisers Montbuild and VNU have fallen out, with the result that this year's PC Show was the last. (See the PC Show report on page 16 for more details) Arguments arose over the show's future direction and management, and VNU has now served Montbuild with a writ alleging breach of promise.

Montbuild is defending itself vigorously and has announced its own show for next year – Business Computing '90 – which will take place at Earls Court between the 25th and 28th September. This comes at a time when more and more pundits are questioning the effectiveness of "multi-purpose" shows covering both the business and leisure sectors. Indeed, magazine publisher EMAP has already announced a European Computer Entertainment Show, again to be held at Earls Court, this time between the 13th and 16th September. Both shows take place at the traditional time – and location – of the old PC Show.

VNU has yet to announce its plans, but already it seems that Earls Court is booked solid next autumn...



Coming soon: Five Atari Lynx handheld games machines to be won!

Only just on sale in the States, YOU could be one of the first in this country to own one of Atari's pocket miracles...

MICRONET MERGER

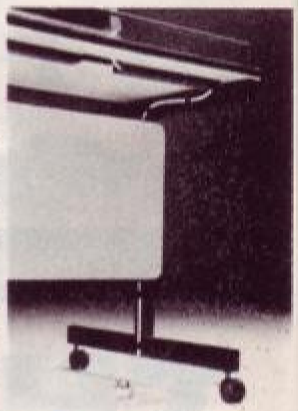
British Telecom has bought out Telemap – the company behind Micronet – and the immensely popular multi-user role playing game *Shades*.

BT, which already owns Prestel and Telecom Gold, is understood to have paid a large sum to take total control of the company. Telecom previously owned 40% of the shares, the remainder being held by publishing giant EMAP and Bell Canada.

Micronet has been around since 1983, and BT has been responsible for the daily running of the company since 1986. The move is regarded as a consolidation of resources, and is reckoned to be good news for Micronet subscribers.

The story comes at a time when BT has lost control of Microlink – the business-oriented electronic messaging service – to Istel Inet in a deal worth £10 million over the next three years.

Neat and Tidy



Budgie Office Products has launched an indispensable device for the tidy computer user. Its unique *Cable Tidy Pack* aims to hide unsightly trailing monitor leads and telephone wires, a lost cause for the *AA* office. The kit consists of one metre of clip-on channelling which can be cut to size and six self-adhesive cable clips. Budgie can be contacted on 0323 648471

Pretty Polly

If you're anything like us at the *AA* office, you'll have trouble finding the disk you want because the label is covered in a totally illegible mess, having had so many different titles scribbled all over it.

Not any more. BlackStuff Ltd has launched *Polly Labels*, an everlasting disk labelling kit. Simply stick a special label over the existing one on the disk, write on it with the disk pen provided and even add a colour-coded marker if you wish. When it comes to changing the disk contents, you can use the eraser pen for minor alterations or a cotton pad impregnated with cleaning fluid to wipe the whole lot clean.

The complete *Polly Labels* kit costs £13.74. Contact the boys from BlackStuff on 0737 833015.



Tally Ho

The Mannesmann Tally MT222 printer has had over £100 lopped off its retail price. The pricey printer – acclaimed for its excellent 24-pin quality combined with very fast printing speed – was originally being retailed at £799.25, but is now available at £684.25.

Call Mannesmann Tally on 0734 503681.

Stop Press... Stop Press...

Medway/King have announced a new version of *X-Press*, the bolt-on package for the *Stop Press* DTP system. The upgrade will now work on the 464, and has been modified to work with double drive systems. Owners of V1.0, the original program can get their hands on the new improved V1.1 by sending £1 to cover postage costs to: Medway/King, 77 Maldon Road, Bitterne, Southampton, SO2 7AF

Senior Citizen

That ever-popular budget printer, the Citizen 120D, has been celebrating passing the 500,000 worldwide sales mark.

Citizen has revamped the four-year-old printer with a newly-designed tractor feed mechanism which will improve paper handling to produce sharper print and graphics quality. The new model has several other minor improvements, including wider paper handling and an adapted pressure leaf which provides a better hold on paper during printing. The printer retains its recommended retail price of £199, but will be available at the usual cut-down prices from mail order advertisers. Citizen is on 0895 72621.



Twins Double

The CPC version of the forthcoming Activision Christmas No.1 contender *Ghostbusters 2* has been written by none other than The Oliver Twins. This – and the fact that they also wrote *Incredible Shrinking Sphere* for Activision last year – has led to rumours that the twins may be abandoning Codemasters. Rumours that were quashed by Philip Oliver:

"We can earn at least as much, if not more, from a budget release. We have a good working relationship with Codemasters, and find budget games more rewarding as they reach a much wider audience. I am not ruling out the possibility of us doing a full price release in the future, but we don't have any immediate plans to write one."

The Olivers have also been beavering away in more familiar territory on the long-awaited *Dizzy 3*, entitled *Fantasy World Dizzy*. The game should be in the shops in time for Christmas and is widely expected to top the budget charts.

It features the popular cartoon hero in search of his girlfriend Daisy, who has been kidnapped and locked away in a castle. Several other 'Yolk Folk' have been introduced, including the acid cool egg Denzil, and elderly egg-head Grand-Dizzy. *AA* staff have seen an early preview edition, but can say no more – on pain of death at the hands of the terrible twins – other than that it features the usual Dizzy arcade adventure format, with plenty of original puzzles to ponder over.

The game is being released by Codemasters under a new label – Cartoon time. Look out for the exclusive review in next month's bumper Christmas edition of *AA*.

That's the spirit!

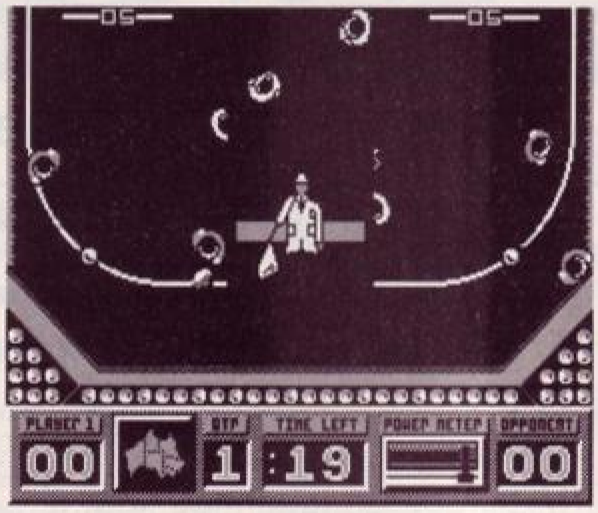
Adventurers up and down the land are mourning the latest release from Level 9. Why? Simply because it's the company's last ever CPC product. Level 9 does however look like it will be going out with a bit of a bang, as the game *Scapeghost* is centred around the antics of a deceased and betrayed gangster.

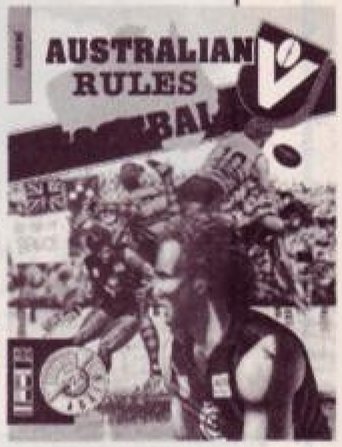


The aggrieved spirit has only three days to clear his name, but has a whole host of supernatural tricks up his sleeve. Dead men don't tell tales, but they may have some haunting secrets they want to let out. *Balrog* will be gunning for this epic next month.

Ozzie rules UK!

Britain's been going minority sport crazy in recent months, so Again Again has decided it's time to get in on the action and has announced an *Australian Rules Football* game. This computer sporting first was unveiled during the Fosters World Cup Final at the Oval recently, and while the Bombers and the Demons fought it out on the pitch, reviewers could be heard fighting it out with their computer opponents.





AA was there and promises to bring you a full report on the early scores in the opening match next month (*that gives us four weeks to figure out the rules – ed!*).

First impressions

- Ghouls and Ghosts – US Gold

The sequel to an old favourite, *Ghouls and Ghosts* is coming for Christmas.

- The Duel – Accolade

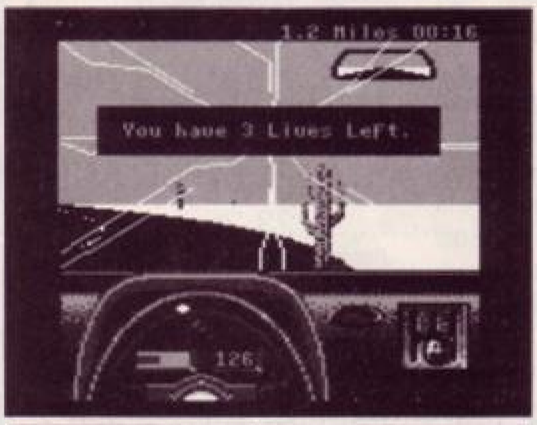
This car sim/race game puts you in control of a Porsche 959 and a Ferrari F40. The family Sierra will never seem the same again.

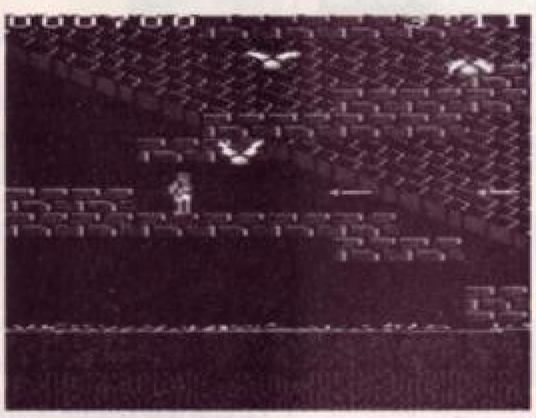
- After the war – Dinamic

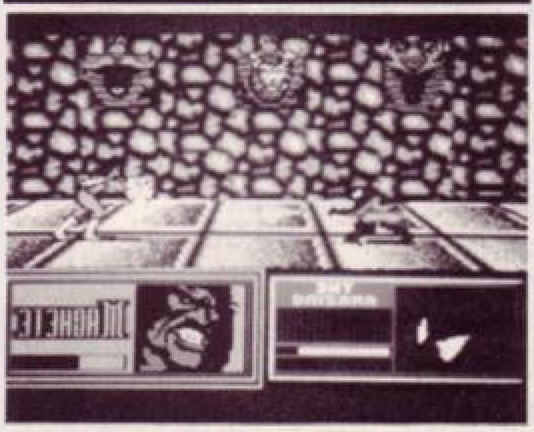
Spanish coders look as if they've done it again with a beat-em/shoot-em/anything you can-em-up boasting giant sprites.

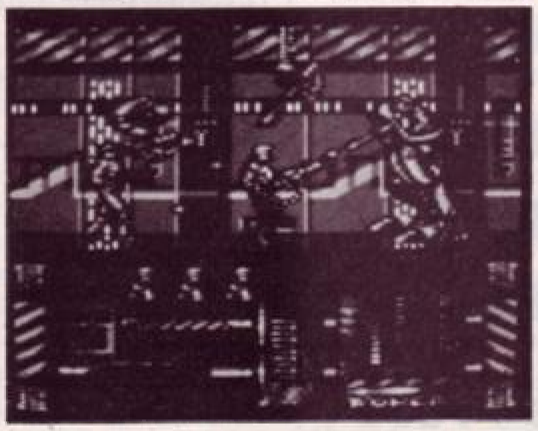
- Dr Doom's Revenge – Titus

After last month's news on the superhero epic, here are the first screen shots of the CPC version









● Top left – *The Duel.* ● Top right – *Ghouls and Ghosts.* ● Bottom left – *Dr Doom.* ● Bottom right – *After the War.*

Blatant plug

This month sees the launch of a new game on the Players label – *The Lost Caves and the Doom Tomb.* A certain Mr Adam Waring was responsible for both the product and the threats that produced this story. *AA* will be giving this 'awesome gaming experience' a good kicking (*review surely – ed?*) next month. In the meantime, check it out – it's your chance to see how good (or bad) an *AA* Tech Ed really is.

Contractual Claus.

It's official, Santa Claus does exist. He's come down from his polar hideaway to give the **Save the Children Fund** a hand during Christmas. To raise money he will be appearing in *The Official Father Christmas* game from Alternative. All the royalties from this £2.99 product will go to **Save the Children**. So if you're looking for a stocking-filler for a CPC fan, this is the game to get.



In this three-part game you've first got to assemble Santa's sled, then find the toys the elves have hidden. When all this is done you've got to answer the Christmas pleas of children all over the world.

Last year **Save the Children** spent over £28,000,000 on overseas projects and £7,000,000 in the UK. Its job is difficult and often dangerous, and as you can imagine, children's lives are not saved by care alone. It's an expensive business, and both Alternative and Save the Children deserve a pat on the back. And being charitable can also be fun!

Listing carefully...

Former Tax Officer and QA clerk Angela Allum plans to start the first professional listings-typing-in and games help service for the CPC. She collects details of all the pokes and hints she can find and then uses them to solve a game – or get near a solution. Her games helpline will be open from 6pm to 9pm most evenings.

Angela also enjoys typing in listings to see what they do – and how. Her program analysis service will use Beebugsoft's Toolkit to find the variables. Also on offer is disassembly of machine code used in *Type-Ins* and tracing of simple machine code programs to printer. Find out more by writing to Angela Allum, 22 Point Royal, Bracknell, Berks or calling 0344 428053.

REACTION

The GPO is having to send vans round with the post now – keep it up!

Got a bee in your bonnet? Something you want to get off your chest? Reckon so-and-so hasn't go a leg to stand on? Write to: *Reaction, AA*, 4 Queen St, Bath BA1 1EJ. There's £15 on offer for the letter of the month!

●The write stuff

You have of course heard of the North/South divide! Well now there's a new divide – the 64K/128K divide. It seems (to me, anyway) that most software houses are turning their backs on 464 owners (not forgetting that the 464 gave them the money in the first place) in favour of 6128 owners. It seems that a lot more products/utilities are released on disk only or make use of the 64K extra the 128 has. Undoubtedly it is a far superior machine, but wouldn't it be a far greater achievement if programmers gave the same on tape?

It is not impossible. They could make the tape a multiload rather than a disk-only release, just loading whatever the system needs, when the system needs it.

Indeed, you at *AA* are responsible for part of this divide by releasing *Shinobi* as part of the cover cassette but without sound or speech for 'poor' little 464 users.

OK, so I'm beginning to sound like Wm ACC Smith, but this subject really riles me.

Even some authors in *Type-Ins* seem to forget that people have 464s by adding FILL commands. There's nothing more infuriating than typing in a listing only to find a FILL command at the bottom of the program.

Michael Heyes (*proud* 464 owner)
Nelson, Lancs

AA: *Well Michael, there seems little point in upgrading a machine and then steadfastly refusing to use any of the new features! Of course software houses will write for the 6128, and indeed many releases are bound to run on that machine only. Multiload tape software would be all very well, but have you really used multiload software? The prospect of loading* Protext's *spellchecker from tape, for example, is too appalling to contemplate.*

As for us at AA *being biased against the 464 – what rubbish! We feature software for the CPC, regardless of whether it's for the 464 or 6128. We only reflect the industry and the users' interests – we don't dictate them! Besides, when it comes to budget software, I would say 6128 owners were discriminated against, wouldn't you?*

Still, let it not be said that we don't listen to our readers. Anyone else out there think their machine (464 or 6128) is getting a raw deal? You know where to reach us...

●The write stuff

I am writing following the article about fanzines – which was very interesting. I myself know how hard it is to set up a fanzine. In my case it was for all Amstrad CPC owners. I advertised firstly in one monthly computer mag and then wrote to various others which cater for the CPC asking if they would mention me in their news pages. Out of the five that I wrote to only one obliged by giving me an article which measured about three inches by four inches on their news page; which if I had advertised properly would have cost a lot of money.

Even so, in the next four months I only received around 20 answers. Firstly I think this shows how unhelpful some large magazines can be in helping a small fanzine get started. And secondly, I now wonder whether people even want fanzines.

Your competition is an original idea and I'm sure many people will have a go. But it's a difficult world out there, and if you want your idea to work I think you're going to need lots of energy and plenty of the will 'not to give up'.

Andrew J Scott
Soham, Cambs

AA: *You're right Andrew, you do need to keep plugging away. You're wrong to say magazines are unhelpful though. Any news item has to be both interesting and important to get into a magazine's news pages and, with the best will in the world, a new fanzine is not big news.*

The best bet for would-be publishers is to first establish that there is a market for the magazine you wish to produce, rather than to do what you feel like and then try to sell it. As for whether people really do want fazines – just look at all the successful publications there are out there.

●Bad circulation

AA's *Amscene* proudly proclaims that its latest circulation figures, for January to June 1989, are 35189, and this is stated to be a year-on increase in sales.

Certainly, the January to June 1988 figure is 35095 – an increase of 94 (wow!). But shouldn't you be comparing these latest figures with the immediately-preceding figure, which is 38457. This show's that *AA*'s circulation has dropped by 3268 – a drop of 8.5% on the previous six months. Care to comment?

Alan Coole
Glasgow

AA: *OK, if you insist. The point about six-monthly circulation figures is that the summer market is quite different to the winter one. Therefore, the only direct comparisons you can make are between the same six-month periods in successive years. Sorry you think the increase is so measly. In the CPC market, which many people seem determined to think is contracting, we were rather pleased. Suit yourself, though.*

●Raving mad

In the October Reaction pages, Derek Wong from Surrey said that your Raves and Mastergames are rarely successful in the Gallup charts. Firstly, this is not true. *Treasure Island Dizzy* and

●Drop those shadows!

Who's responsible for letting that silly twit loose again who puts shadows all over the printing so us poor OAPs have a hard time reading it? I thought you'd got rid of him (or her) over a year ago. I have got every issue of your great magazine. We had a spell of this wozzack before and I missed loads of help info and type-ins because of him. Now he's back again – shadow boxing over p14, over piano keys on p18, shaking hands on p21, walking all over p22, blue blotches on pages 46, 47 and 50. Sickening colours all over the *Cheat Mode* pages.

Thank goodness there was nowt over Hugh Gammon's tip for Multiface saving. Thank you Hugh, you've saved me a heck of a lot of disk space.

Please, please, please give us OAPs a break and transfer this mixed-up child to the Outer Hebrides. I don't want to miss one word in your excellent and very helpful *AA*.

Thank goodness you kept him off this month's type-ins.

Laurie Mash
Wakefield

AA: *Rest assured Mr Mash, our Art Editor is even now writing out 5,000 lines saying "I must not put shadows behind all the text".*

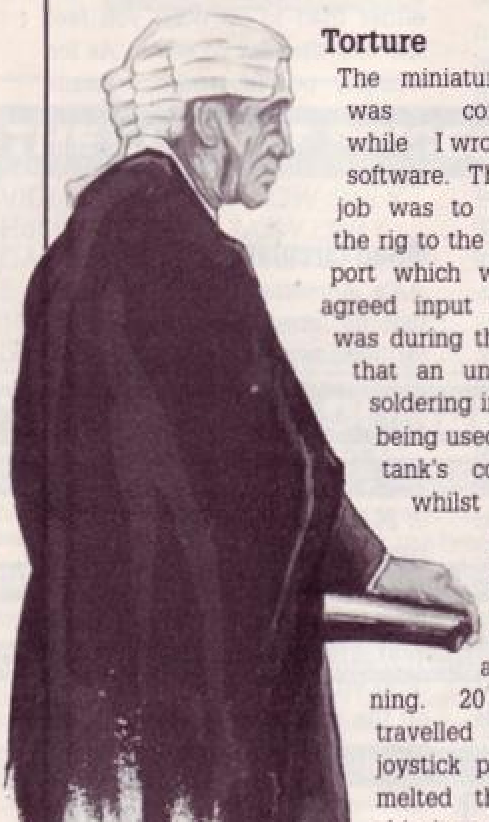
CRUEL BEAST

I must be one of the people Judge Maxton (*AA*49) would want to put away for excessive cruelty to computers.

In the winter of '84/'85 I split the price of a new 464 with colour monitor with my father. He was to use it to drive a demonstration rig for his firm at a business fair, after which it would be redundant.

The firm built ultrasonic testing tanks for aircraft components. These included a probe able to be moved along all three axes to follow intricate aircraft shapes. The role of the 464 was to gather the data and represent it as a screen of false colour, to show any hidden faults in the aircraft part.

It's interesting to note that the computer which does the same job for real rigs is a £25,000 twin-80Mb hard disk IBM-compatible 8MHz Ferranti or 20MHz Compaq; the only difference being speed and storage.



Torture

The miniature tank was completed while I wrote the software. The next job was to connect the rig to the joystick port which was the agreed input hole. It was during this time that an unearthed soldering iron was being used on the tank's computer whilst the unsuspecting 464 was up and running. 20 amps travelled up the joystick port and melted the first chip it came to. It must have been the keyboard chip because the effect was like someone randomly hitting the keyboard. Pretty, but useless. The Amstrad Kwik-Fit guys soon sorted that out.

Beatings

The computer was given to me, and since then the unit has travelled approximately a thousand miles strapped into the front seats of various cars, been fallen on and dropped twice. The effects are that the 'F0' key is held on with superglue (where the monitor fell on it) and there is a large chunk of plastic missing from the back of the monitor. This happened in January; I was running into my brother's house with the monitor during the Superbowl half time to play *Matchday II* when I slipped and fell. The monitor landed on concrete just as I landed on top of it. I didn't kill my monitor, in fact it works normally except snowing a bit when the brightness is adjusted.

A strong industrial magnet was left next to the monitor for about two days without use. On power up, I was confronted with large boils of colour spread across the usual message. Careful positioning of the magnet would cancel these, but only whilst the magnet was present. If computers contract tropical diseases, they are short-lived, because I switched off and the monitor cured itself inside half an hour.

Mutilation

The computer's current add-ons list left over from its industrial days is as follows:

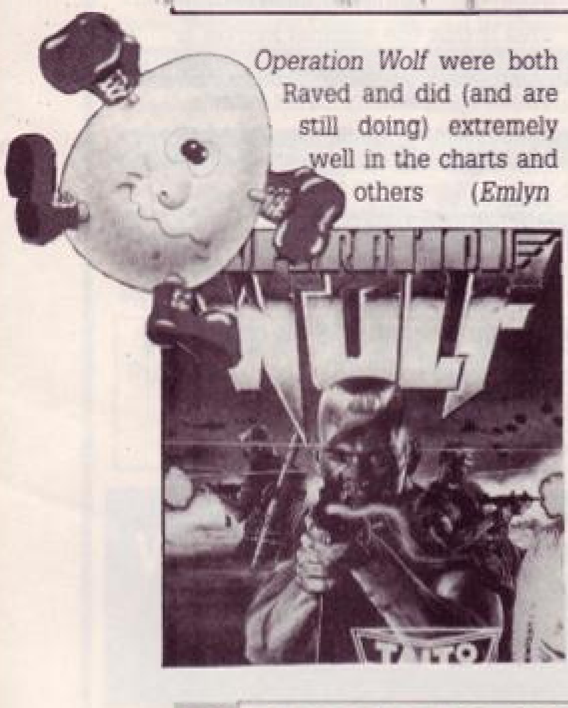
1 Canon PJ1080A colour inkjet printer
2 DK'tronics speech synth (old style)
3 Approx nine various working and non-working joysticks (including baseless)
4 Joystick port splitter
5 KDS Electronics 8-bit printer port
6 One-metre coiled lead extension box
7 External speaker soldered to replace the internal one-inch effort
8 Large blob of Blu-tack stuck to the side of the monitor

I am currently writing a game which Codemasters will publish (although they don't know it yet). My system must be one in a million to survive my father and I. It is still going strong as a serious games machine/ word processor/ games writer/ student project writer/ pretty pictures producer. There is nothing wrong with a tape-driven 464 and the old-style keyboard. It's produced the business time and time again and doesn't crash when it wobbles. Speaking of the ZX81, when is *3D Monster Maze* being converted? I have yet to see an Amstrad game produce the same fear of being eaten.

Chris Surawy
Chippenham, Wiltshire

AA: *If there was a Royal Society for the Prevention of Cruelty to CPCs, Chris, you'd be reported right away. There was scarcely a dry eye in the AA office as we read of the appalling hardships and agonies endured by your trusty machine. We just hope you can live with yourself.*





Operation Wolf were both Raved and did (and are still doing) extremely well in the charts and others (*Emlyn Hughes International Soccer, Crazy Cars 2, WEC le Mans*) also did fairly well.

Secondly, nowadays it is much harder to get a full-price or original game into the charts with the current tidal wave of Raves from the past being re-released on budget, doing better in the charts than they did before.

Thirdly, *AA* Raves and Mastergames are better than the games currently topping the charts, so come on *AA* readers, buy the Mastergames! I buy three-six games a month, some of them being full-price, some being games at the top of the chart and others being high-rated *AA* games. So far this year I have bought 12 games which received good *AA* reviews and have sent off for another. I think all the games are Mega. (Except *Microprose Soccer* on tape – but you did warn me!)

Now for something completely different. Do you or any other reader have a program (preferably short) that could dump Multifaced screens to printer? I have a 6128, DMP2160 and a Multiface 2+ version 0A.

Ben Patcheson
Scaldnell, Northants

AA: *Multiface print dumps? Make way for AA's resident technical knowall Adam...*

"You could try loading your Multifaced grabs into an art package and then printing them out from there. This one was printed from Art Studio."



●Fantastic plea

Please help me! I urgently need *Fantastic Voyage* on disk!

M Segar
18 Ladyewood Road
Wallasey
Merseyside L44 9BS
Tel: 051 639 1253



●Pat on the back

I recently purchased *Tasword, Tas-Spell* and *Tasprint*, but *Tasprint* would not configure to my Star LC-10 printer. I wrote to Tasman telling them of my problem, and two days later I received a replacement modified disk. This says a lot for the postal service but it says even more for Tasman Software. I think that such good service should be recognised in print.

E Kilpatrick
St Helens, Merseyside

AA: *And so say all of us.*



SAVING THE AMSTRAD EMPIRE



This year like any insane person I went to the PC Show. As I own an Amstrad I popped off to ye olde Amstrad stand to ask a few questions:

Q) Why does the Speccy have a light gun bundled with it and the CPC doesn't?

A) Well we want to be different, you can't have two packs the same, can you?

Q) Why isn't Amstrad reprinting the Firmware Manual?

A) What's Firmware Manual?

Q) Why hasn't the Amstrad bundle changed and why are you still giving away the same games, which are now very basic?

A) If you come back in an hour there will be a person from the Amstrad User Group and he'll answer all your questions.

The lady then started to talk to someone else. Come on Amstrad, you have the best machine in the market for its price:

1 The graphics beat the Speccy's and the resolution's better than a C64.

2 The graphics even rival the ST – look at *Purple Saturn Day* or *Captain Blood*. 16-bit graphics on an 8-bit machine!

3 The sound is better than the C64 and the Speccy – just listen to *Zynaps* on the CPC then on the ST. If you can hear a difference let me know.

4 The CPC6128 is a small business machine. It has a wider range of serious software than the Speccy and C64 (can you find a Speccy or C64 mag which is also dedicated to serious software on a regular basis?) – just look at *Protext, Advanced Art Studio* and *Stop Press*.

5 The rep at the Cheetah stand showing off the light gun was talking out of the top of his head. I asked him why they were not releasing the gun on the CPC. He said that CPC owners didn't buy that many add-ons after they had bought their CPC. If this is so, why are so many companies producing more add-ons for the CPC than any other computer on the market? And why do the Darling brothers (Codemasters are writing the games for the Cheetah light gun) think that the CPC is more important to them than the C64 (*AA* issue 35 Sep '88 p30)?

6 What computer sold the most games at Xmas last year, Mr Sugar? Why are you trying to kill off something that's good and makes money? What was Amstrad before the CPC? Nothing! It is now a very large company selling lots of computers and shares which are falling rock bottom because Mr Sugar can't take one single piece of advice. Please listen, Mr Sugar, you haven't got much time. You must act now.

Give the CPC lots of air time. *Slowly* kill off the 464. This should take place within the next three years. Replace it with a 4128. Or the best solution is to design an Amiga-beating computer with 8-voice stereo sound, 1046 colours and – most important – put a ROM in the machine. So when you switch it on there's a BASIC to greet you. Add a mouse, joystick – with two accessible joystick ports – built-in MIDI and make add-ons the most important feature, with genlocks etc. A 3.5-inch disk drive is essential of course. The machine must be a 6128 16-bit, with lots on the small business side (this is vital to make it a success).

Meanwhile, change the 464's case colour (keep the 6128 the same). Redesign the keyboard so that the keys slope in a curve. Add an RS232 and change the BASIC slightly with better commands. Change the package – add the light gun and *high quality* games, i.e. from Ocean etc. Add *Stop Press* and *3D Zicon* with the mouse, the *Advanced Music System* and the *Protext* collection on ROM. Put a nice, enclosed Amstrad ROM board inside the case, and design it so that you are able to switch off the ROMs without pulling them out (some games don't like them fitted). Bung in the Firmware Manual, give the CPC two joystick ports and put a *good quality* joystick in the package, and that's it!

Jefferson Boss
Huntingdon, Cambs

AA: *Er, yes. That seems to just about cover everything. Are you reading this, Amstrad?*

●Australian veggie

Hi. I'm writing all the way from down under in Aussie Land. And here's a few things I have to say.

I personally would like to see a lot more excitement, more full-colour pictures. Yes, full-colour pictures. I'm kind of sick of seeing black and white pictures of these new fabbo games you keep on talking about.

Speaking of games reviews, you need more. And you also need more screen shots for each game. And don't say you can't fit them in because you have before. Take for example the review of Vindicators. You had a very nice little film strip going up the right side of the page. Just to show us little vegemites how good the game actually was.

Speaking of games in Australia, do you know how much it is for a newly-released game here? (*No, but I think we're going to find out – ed*) No? Well they cost $44.45. Not £14.95 or £8.95 but $44.95. And Amstrad Action alone costs $5.20. Everything over where you little vegemites (*hang on, I'm not so sure I like being called a vege... what was that again? – ed*) are costs so little compared with Australia.

And when or if I read this letter it will be about four-six months later. Yes, that long. (*Is that from the time you started it, or from when you finished – ed*) And I got this address out of the June edition.

Well, that's about all from me down here. If any of you little gamesters would like to write to me, please do. See ya.

Shane Linley
PO Box 465
Albany
Western Australia

BROADLEY SPEAKING



Uh oh, sex and piracy again... Emma Broadley, the woman who makes Attila the Hun look like a social worker, speaks her mind...

Well Mike Wheeler had plenty to say last month about my comments on sex in computer games, didn't he? I suppose everyone's entitled to their opinion, but I think Mike still labours under the misapprehension that men really can put themselves in the position of us women. The point is that what is degrading to one is not degrading to another. He also seems to miss the point that women really *are* forced into taking their clothes off for money. Not every seventeen-year-old determined to maker her mark as a top fashion model has either the poise or the looks, frankly, to make it, and can easily fall prey to unscrupulous agents and photographers – all *men*, you'll note – who are just interested in making a quick buck.

Mike also suggest that *men* are exploited by *women*, no less! Well frankly, if you'd ever been at a photographer's studio and watched a half-naked slip of a girl being ogled and prodded by half a dozen leering men during a shoot, you'd be in no doubt about who was exploiting whom!

Long live the CPC!

Nice to see that Amstrad has scotched rumours about the CPC being scrapped. Nice too to have to eat my words! Last month I complained at Amstrad for not promoting the CPC, but I learn now that the company is to invest £600,000 in a nationwide advertising campaign – bravo! I could have told you before that the whole idea of Amstrad dropping the CPC was absurd, of course. After all, Amstrad has on its hands a solid, dependable and versatile machine with a very strong – and getting stronger – software base. The CPC is going to be with us for years yet, mark my words.

Mind you, you could easily have got the opposite impression from this year's PC Show. The games industry was well enough represented, with all manner of gaudy arcade conversions, no doubt with as much lasting appeal as an unrefrigerated French brie. But where was all the serious software? Come on all you serious manufacturers, show yourselves!

Broadley Brickbats

If you've got anything to say about Ms Broadley's column, or the opinions therein, write to:

Broadley Brickbats, Amstrad Action, 4 Queen Street, Bath BA1 1EJ

We would like to stress once more that the opinions expressed by Ms Broadley do not necessarily coincide with those of the editorial team. Also, we refuse to take any responsibility whatsoever for any consequences that might arise from any disagreements between correspondents and Ms Broadley. We'll visit you in hospital, though.

IT'S A STEAL!

"I am writing to give you my views on the rights of copying software. For a start, I disagree with just about everything that Miss Broadley said in *AA48*. If I buy a game then it is mine to do with as I wish. Why should a friend of mine pay £9.99 for a game if I can copy it for him for free? I'm not exactly made of money, so if one of my friends (yes, I have more than one) should offer to copy a game for me then I would not refuse. I do not consider it to be stealing because I would not buy the same game that my friend had as I could play it on his computer every night.

The idea that one person buys a game one day and the whole of the school has it the next day is just a figment of Broadley's imagination. I copy games for a couple (three or four) of my friends, but nobody else.

My friends do the same. I have read some of the new copyright laws but reinforcing them is going to be next to impossible. I certainly will not be deterred by the new laws (partly because I can't understand them). My point is that I don't consider copying or lending out my games to close friends to be 'piracy' or 'stealing' and I certainly don't consider myself to be a 'thief'.

Finally, may I just say that I would like to see a few more games reviewed and a little less of *Broadley*!"

M Prellear, Newport

Well, Mr Prellear, your attitude astonishes me. You say you only give your friends three or four pirated copies, and that they do the same. According to my reckoning, by the time that process has been gone through just three times you've been directly responsible for not four pirated versions but as many as sixty-four. Understanding the copyright laws is easy. You do not distribute pirate copies. Simple enough for you? As for your claim that piracy as you practice it is not theft, do you remember those old unmanned newspaper stands where the distributors trusted you to put in your money and just take one paper? What you're doing is effectively paying for one paper then taking half a dozen for all your mates. That's theft.

MAIL ORDER MADNESS

I've been forwarded a letter from one of *AA*'s readers, and it's on a subject I've wanted to talk about for a while – mail order.

The letter is from a Mr P Hall of Basildon, and reads as follows:

"I wonder if many other readers have had trouble with mail order companies advertising games, and not just delays in them sending orders out. As an example, there were a few mail order companies advertising *Carrier Command* in tape version for the Amstrad.

Yet we now know that this game is not being released for the 464 or tape machines at all. Yet these companies saw fit to advertise that the game was available for the 464. There must have been many readers who took these companies at their word, sent them the cost of the tapes, and are still waiting for a product that doesn't exist.

Wouldn't it be better for all us readers if mail order companies were allowed to only advertise games they actually have in stock?"

Good point Mr Hall, and one I've been making for a long time. However, it's only fair to point out that there are both good and bad mail order suppliers. I bought all my CPC comms gear by mail order and had no trouble whatsoever. (Mind you, anyone who messed me about would soon find out they'd mixed with the wrong person.)

The thing is that mail order companies frequently have to advertise goods they don't necessarily have in stock *at that moment*, because you simply don't know what you're going to sell out of once the ad has gone to press. I should know, after all, having run a successful little ceramics business for some time now.

What I don't agree with, however, is advertising goods which haven't yet been released, however difficult it is in the games market to know when products are *really* going to be out. For example, I would never have considered advertising my Columbian iconographs before I'd cleared the deal with my suppliers.

Rest assured, Mr Hall, that both I and the lads on *Amstrad Action* will be doings our damnedest to clean up the mail-order scene.


DRIVING'S BIGGEST GAME HAS JUST GOT BIGGER..
TURBO
Out Run™
AVAILABLE ON
CBM 64/128 CASSETTE
& DISK
SPECTRUM CASSETTE
AMSTRAD CASSETTE
& DISK
ATARI ST & AMIGA
Screen shots from various formats.
U.S. GOLD
SEGA
MORE CAR, MORE ROAD, MORE ACTION!
U.S. Gold Ltd., Units 2/3 Holford Way, Holford, Birmingham B6 7AX. Tel. 021 625 3388

The Show must go on!



Or must it? TRENTON WEBB elbows through the crowds at what may be the last PC Show we shall ever see...

Tense nervous headache? In need of a long rest? Then you're probably still recovering from the September's PC Show, the annual jamboree for computer people. The event where thousands of visitors, millions of monitors and postively trillions of PR people hawking their hardware fill Earls Court to bursting point.

This year's biggest surprise, however, didn't come from the new toys on display but from the show itself. If the rumours are correct, 1989 could well be the last year of the show in its present form. The two organisers, VNU and Montbuild, have fallen out, with Montbuild announcing its desire to pull out of the PC show and launch its own purely business/serious show next autumn – also at Earls Court.

Lawsuits are pending, and to compound the confusion EMAP – publisher of *The One, Ace, Commodore User* and *Sinclair User* – has announced plans for a European Computer Entertainment Show to be held in mid-September 1990. With all the major venues in London already booked for next autumn, a major sponsor missing and rival shows planned, the future looks bleak indeed. RIP PC Show!

Despite it all, this year's show was one of the busiest and liveliest ever. All the powerhouses in the CPC games world were present but there was a slightly dissapointing turn-out from serious software and hardware manufacturers. Established firms such as Arnor and HiSoft were in attendance, but the newer companies on the whole shied away – possibly because of the multi-format, multi-purpose nature of the show.

Amstrad, the usual star of the show, took a back seat while others stole the limelight. Apple, for example, unveiled its new Macintosh portable in an uncharacteristic display of glitz. The new machine arrived movie-star-style at lunchtime on the first press day and was welcomed by an ungainly crush of journalists hungry for the first look.

For both games players and serious coders (or any mix of the two), the show provided the chance to get their hands on cut-price hardware and software. Disks were selling at £17.50 for ten and tape games for all formats were literally being given away, especially as the show wound down on Sunday evening.

Here now, then, is the AA guide to who was selling what and to whom at this year's PC Show.



● *Power Drift*: Wheel-to-wheel action from Activision.

Accolade was displaying its current projects for all formats. Two particularly noteworthy examples were *Jack Nicklaus Golf* and *The Duel*. The latter is a(nother) race game between two of the fastest cars ever to touch tarmac: the Ferrari F40 and Porsche 959. For the first full review see this month's *Action Test*...



● Another Activision product on show was arcade conversion *Altered Beast*. Based on Greek myths, the graphics alone look set to make for a legendary game!

Activision only put together a small stand this year, mainly selling forthcoming games posters for charity. Arcade versions of some of its up and coming titles were on display, including *Fighting Soccer* and *Power Drift*. Its stall might have been tiny, but Activision did have a massive hospitality suite upstairs for the press. The lack of public preview material, it was claimed, was not intended to insult the punters, but was a gesture of dissatisfaction with the show's organisation.

Amstrad was more than furious with the recent totally unsubstansiated rumours of the CPC's demise. To prove the point there was a positive pride of CPCs on display, backed up with talk from the Amstrad boys about a new promotional campaign to push the CPC towards Christmas. The focus of attention will be a TV tuner, so not only can you have the computing power of a CPC – the best 8-bit on the market – but also a personal TV. Bearing in mind how well the machine did last year *without* advertising support, the future looks rosy.

Codemasters didn't have a stand, but the team was eagerly wandering the halls accosting journalists with information about their new sister label *Cartoon Time*.

With a near 20% market share they feel that the only way to continue growing is to split themselves in two, attacking different areas – the sims and the cutes. The new label is launched on November 14, with *Ollie and Lissa III*, *Wizard Willy* and *Frankenstein Jr. Dizzy III* is being cooked up (*chance would be a fine thing – ed!*) right now by the Oliver Twins, and will be the main launch on the new label this Christmas.

CDS was more than keen to talk about its new mega-program *European Super League*. Yet another footie game, *Super League* aims to take a slightly different approach and become a 'graphic adventure in soccer'. It appears to have at last broken the mould of traditional management games and features an icon-driven system built within the on-screen pictures.

Dinamic was showing off its new game *After the War*. As usual the graphics look ridiculously good, but this post-apocalpytic arcade-style game may have too much gameplay and be too difficult if the opening stages of both *Army* and *Navy Moves* is anything to go by. Dinamic's stand looked a little lost, but judging by the first screen shots it looks as if its game will speak for itself!

Domark had one of the liveliest stands this year. *Hard Drivin'* machines were coming out of its ears and yet there still weren't enough to go round. If the public reaction to the conversion is anywhere near as positive, Domark has got a monster hit on its hands.

Also on view was *Toobin'*, one of Domark's forthcoming Tengen conversions. Again it looks as if the programmers have exacted every ounce of arcade accuracy from this most off-the-wall of games (you raft down famous rivers of the world fending off disaster by throwing coke cans!). Domark's made such an impression with Tengen that the twins have won the right for all the coin-op maker's future work.

The Edge still had little to show from its two Marvel comics licences *Punisher* and *X-Men*, despite its massive stall being decked out in all manner of comic book finer, and clips from the forthcoming *Punisher* movie running on the overhead video. And there were so many *Garfield* pictures you'd have though it was *The Look*...!

Elite and its **Encore** had possibly the dullest stand imaginable, running the cafe stall a close second for Least News of the Show Award. All that they could muster was yet another rehash of their past glories in two more compilations, *Thrilltime 1* and *2*.



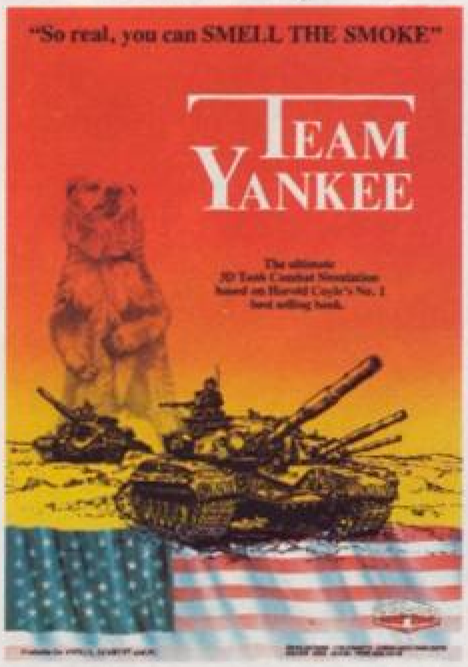
● Tintin – the Man with the Golden Quiff – out soon on the CPC from Infogrames.

Empire was continuing to bid for chart superiority by announcing even more releases and giving sneak glimpses of development work. *Gazza's Super Soccer* is nearing completion and looks interesting. It will use a 'two view' system (from the side and in front of the goal) – let's hope the switching doesn't disrupt the gameplay.





Also on show were demos on various machines of *Wild Streets*, *Dr Doom's Revenge* and *Team Yankee*. *Wild Streets* is a stunningly violent beat-em-up, with the heroic player being aided by a Rotweiler, of all things – which if nothing else should give the tabloids something to work with.





The other titles previously mentioned in *Amscene* also looked more than promising, especially the Marvel licence. Could it be that the expected driving game bonanza will fizzle out to be replaced by comic book heroes at the top of the Christmas charts? Empire was keen to stress the accuracy of *Dr Doom*, as the original game graphics were partially designed by the Marvel Comics artists themselves!

Grandslam was proudly touting its new licence acquisition *Space Harrier II*, a fact flashed on huge video screens. Its other current project is the much-vaunted and highly-envied *Liverpool* licence. To be brutally honest, the game on display was a bit ropey – but it was only a production mock up.

Continuing the soccer theme, *Saint and Greavsie* – a soccer trivia game – will be coming soon, but it wasn't a great success as an eye-catcher in a room full of flashing guns and bombs. Still if Grandslam can capture that particular brand of naff TV humour it may yet prove that even in the computer leisure trade there's room for this 'funny old game'.

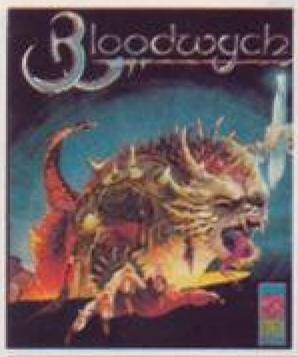
Hewson's main attraction was its stunning new dragon logo, designed to give its games a greater impact on the shelf. The first CPC project to sport this new badge will be *Mazemania*, a sort of *Pac Man/Skweek* game that seems to have a harder edge – the poster shows a particularly gruesome, leering goblin. It should be finished in time for Christmas.

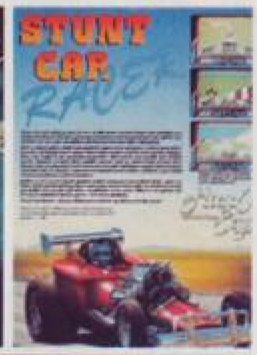
Infogrames' big boast of the show was its new licence *Tin Tin*. The cartoon detective looks set to blast off for the moon on one of his greatest adventures ever, with all his friends in tow – Captain Haddock, the Thompson Twins, Professor Calculus and Snowy. Again it seems that European companies are shying away from the traditional fodder of arcades and film licences favoured in the UK.

Interceptor, the budget games specialist, had two new sure-fire successes – if only on the basis of their names! *Saigon Combat Unit* manages to work Vietnam, the Army and fighting into one single title. It was good to see a budget company able to take such a prominent position at the show, especially as its games are all original and not re-releases.

Konix, the joystick king, was trying to steal the show's thunder by finally showing its Console/Home entertainment system – once rumoured to be on Amstrad's shopping list. Although the machine itself arrived a day late and was strictly off-limits, it was still quite a head-turner. The word on the street was once

that Amstrad was backing this little baby, but the recent revelations about Mr Sugar's own plans for a console based around the 6128 have scotched this. Imagine a wedding of the two, though – a tried, trusted and powerful games system like the CPC's united with fun add-ons like hydraulic chairs, handlebars and steering wheels...









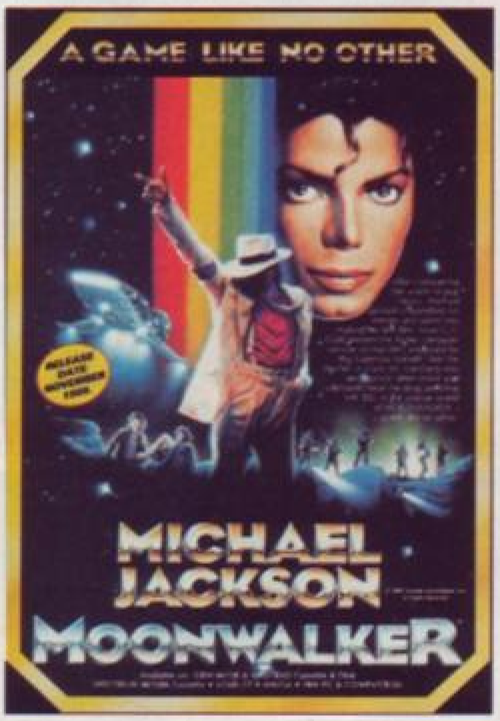
Microprose's legendary leader 'Wild' Bill Stealey was on hand to lead his troops into the fray this year. And judging by the gossip, Microprose's car game *Stunt Car Racer* proved one the biggest hits of the show. Unfortunately, the decision to convert the game to the CPC hasn't been made yet, so Amstrad owners make yourselves heard!

Mirrosoft apparently couldn't face the idea of the large crowds, and had a reception suite in a nearby hotel. A shame, as the company was showing off *Bloodwych* as well as some interesting non-CPC products (*contradiction in terms, surely – ed*). *Bloodwych* looks to set to break down the barriers between arcade adventures and traditional treasure hunts.

Ocean was in dominating form, and stole first prize for most memorable stand on show. A huge video wall ran clips from up and coming games and scenes from *Batman* and *The Untouchables*. Two huge American cars were the focal point of the display itself, even though no-one seemed quite sure why they were there! Being late '50s models, they were to late for the *Untouchables* and too early for *Batman* ...

The Complete Chaos Award also went to the Manchester crowd – for its Arcade Alley. This was to showcase all the company's new licences in arcade form, but the trouble was fighting your way to the front of the queue. One of them was *Cabal*, a new shoot-em-up that has a floating on-screen cursor like *Operation Wolf* but shows your character on-screen too. Other good news from the Ocean stable and Virgin jointly is that the two-player gunfight *will* be available in a light gun version.





Rainbow Arts is returning to the CPC fold, and while its stand had little on display there was plenty being promised for later in the year. Rainbow Arts produces Amstrad software solely for export because of the vast number of eager CPC gamers in France, Spain, Britain and the rest of Europe! The games it's planning to release will be here soon, spearheaded by *Spherical* and *X-Out*.

Tynesoft was awash with Eddie Murphy paraphernalia to promote *Beverly Hills Cop*. Although it missed the boat as regards topicality, the very name Eddie Murphy will ensure success. Just think how bad *Best Defence* was, and that still made money on video! It will be interesting to see if the pace and humour of the movie can be translated into computer gaming. As yet there's no mention of how they're going to recreate Eddie's particular style of speech! (If you know what the ❖❁❉★ I mean!)

UBI Soft has broken its long silence on the British scene and was previewing several products at the show. *Skateball*, *Puffy's Saga* and *Iron Lord* finally look set to appear (they were first previewed last Christmas). *Skateball* is likely to be the first here, and is based on a future sport that combines the skill of football and the thrills of Rollerball.

US Gold was in fine show form. On display was a shiny red Ferrari Testarossa to help hype *Turbo Out Run*, the sequel to *Out Run*. There was an arcade machine running and a high score competition, but despite what some thought the car wasn't the prize!

In fact that's what dominated the gigantic US Gold stand – row upon row of arcade machines showing off all their Capcom glory: *Forgotten Worlds*, *Vilgilante*, *Ghouls and Ghosts*, to name but a few. The arcade machines that aroused the most interest, though, were those due for Christmas conversion. *Turbo Out Run* and *Ghouls and Goblins* were not the only wares on display, however. Upstairs the 'Gold team was eager to show off its other new toys. Two new tank simulators were being talked about –*Track Attack* and *Heavy Metal* – *Pinball Magic* was hoping to out-score *Timescanner*, and most importantly *Skweek II* by French programming house Loricles was on display. If he can stop swearing, maybe he can get to number one this time!

New Advanced D & D title *Dragons of Flame* was being pushed with more freebies and glossy brouchers than a person can stand, and has been definitely earmarked as a pre Christmas release. The odd one out was the *Moonwalker* conversion. The programming team has produced very pretty graphic roughs for display – but it remains to be seen whether it can inject any gameplay.

Virgin too had a large stand, taking the show by storm with its budget label for 16-bit machines retailing at a mere £5.

Its other major pull was the Sega section, which was inundated with requests for the new *S* magazine, a sister publication from Future.

On the whole, there was little CPC stuff on show, but promises of great things in the offing à la *Ninja Warriors*, and both of the *Double Dragons*.

With *Continental Circus* and *Shinobi* as openers, Virgin could hardly have asked for a better start to the games industry's silly season.



HIT'EM FOR SIX!
RENEGADE
HYPER SPORTS
KONAMI
RAMPAGE
ALSO AVAILABLE FOR BBC
The HIT Squad
THE GREAT ESCAPE
SHORT CIRCUIT
PING PONG
KONAMI
ALL AVAILABLE FOR:
SPECTRUM
COMMODORE
AMSTRAD
£2.99 EACH
HIT NAMES
HIT GAMES

BrunWord Elite

BrunWord 6128 £30

BrunWord 6128 is specially written for the Amstrad CPC6128. Months were spent just optimising the routines into their smallest, most efficient form. The result is the fastest, most convenient word processor for this computer, complete with the fastest spelling checker and a card filing programme for mail merging. Whether you are writing a few letters or a complete novel, you will find no better assistant than BrunWord.

The word processor, spelling checker and 30,000 word dictionary, are all loaded into memory by typing RUN "BRUNWORD". The disc drive is then completely free for your data disc.

All other word processors, even the ROM versions, need to access the programme disc to test the spelling. (ROM versions have the dictionary on disc). This is slow and can involve many disc changes. For example, Protext needed the disc to be changed eight times to check the spelling of our test file, whereas BrunWord needed no disc in the drive.

The 40 page BrunWord manual has several detailed examples, starting with step by step instructions to produce and print a simple letter. But your very first step is to load the TUTOR file into BrunWord. This takes even the complete novice straight into word processing and demonstrates the powerful editing and formatting features of BrunWord. There are also examples of printer control, showing how to create headings, to underline or to emphasis, and five deliberate spelling errors for you to correct. The tutor takes about 20 minutes to run through and after that you will feel confident to type in your own text.

BrunWord Features

*40, 80 or 128 column display *Touch typing speed over 200 words/min *True insert or overwrite *Justify or unjustify paragraph or whole text *Justified text has balanced appearance *Instant word wrap *Block save, move, copy, insert and delete *Local editing with word delete/undelete *Adjustable margins and TABs *Column/Line/Page display with file name *True word count *Find and replace *Help menus *Memory filing system *Single character embedded printer commands (18 with 3 printer codes and 21 with 10 printer codes) *Page throw markers *Multiple copies *Odd/even page headers/footers with page numbers *Multi file printing (new page or continuous) *Print specified pages *Works with any printer *True display superscript and subscript numbers *User defined print characters *Load ASCII files from other word processors *Save ASCII files for other word processors *Files can be encrypted *Maximum file size about 9 pages of text.

BrunSpell Features

*Memory resident with word processor *Checks 4,000 words/min *30,000 word dictionary *No American spellings *Add up to 5,000 of your own words *Instant lookup *Helps to find correct spelling *Automatic correction.

DataFile Features

*Alphabetical, numerical, date sorting on any field *User defined headings *Search routine *Data merging into BrunWord *Label printing.

Comparisons

We have tested BrunWord 6128, Protext (disc) and Tasword 6128 with the same file of 3366 words.

BrunWord scrolled 40% faster than Protext which in turn scrolled 19% faster than Tasword.

Protext was the fastest to justify but needed a separate operation to see the result. BrunWord produced the best appearance of all three and was 30 times faster than Tasword.

Our simulated typing test reached 218 words per minute. Both BrunWord and Protext had no trouble at this speed but Tasword was very slow inserting text into the start of a paragraph and could only handle 16 words per minute.

The spelling test checked all 3366 words. BrunSpell took 52 seconds and needed no disc changes. Prospell took 6 min 24 sec and needed 8 disc changes. Taspell took 18 min 46 sec and needed 3 disc changes.

Info-Script £50

A database without a word processor is like a car with square wheels. It gives an uncomfortable output. The engine is a very important part and some misguided enthusiasts might think THE most important but if that power cannot be coupled to a useful purpose then it has no point. The power of any database is in the saving, sorting, finding and displaying of the data but without a word processor to interface this data to the outside world, it is like having square wheels.

We have designed a database that uses many of the internal routines of our word processor, producing a very compact combination. This is the exciting concept of Info-Script. A comprehensive relational database integrated with a powerful word processor, giving total flexibility to the way that the data is printed. A fast, friendly combination that has great depth of power.

100 Letters £15

This is a utility for use with Info-Script, enabling pre-written letters to be easily selected and personalised. It is supplied with a library of over 50 letters to give you a starting point for some of those tricky letters. You see just the right job advertised and need guidance on writing the letter and the format of your CV. Or you need to write a letter to instruct your bank to change a standing order. There is a pattern for each of these and many more. The manual takes you easily into writing these letters and explains in simple terms how to create your own letters patterns. The library can easily be expanded to 100 letters but there is no limit.

BrunWord Upgrade

Send your BrunWord 6128 disc, BrunWord manual (not the packing) and a cheque for £22.00. We will record Info-Script, test the disc and return with a new manual.

Letters

I am extremely interested in the sound of your Info-Script. However, as the cost is £50 I am somewhat hesitant in purchasing and would therefore be grateful for any further literature. I am presently using Protext on ROM with Promerge and Pro-filer, but accessing Pro-filer is incredibly slow and long winded. Your advert would indicate that access time to stored data is much superior.
Mr G (Nottingham).

Thank you for my recent copy of Info-Script. My euphoria has nearly died down now - it is superb. It is a big improvement on my Protext and Pro-filer in that it combines the two with vastly superior speed and is exactly what I need.
Mr G (Nottingham).

May I take this opportunity to express my appreciation of BrunWord. My son has been the main user. After years of torture in school with pen in hand, the use of the word processor enabled him for the first time to concentrate upon the substance of what he wanted to write, and return later to correct and organise. The net result is that a young man who formally struggled at school and hated it, now accomplishes the written components of his course with ease and satisfaction.
Mr G (Sutton Coldfield).

I have found it (BrunWord) a very easy word processor to use, and the more I use it the more I like it. The same goes for Info-Script, the more I use it the easier and more flexible it becomes.
Mr L (Australia).

BrunWord Elite £90

Our original aim in designing this programme was to produce a fast desk top publisher with very good quality printing and a memory resident spelling checker. A few jottings on a scrap of paper revealed that two 256K memory expansions would be needed and that even then it would be far too slow. BrunWord Elite is our solution to this dilemma and runs on an unexpanded CPC6128 (or CPC464 + disc + 64K). It starts by assuming that the printer knows best how to print and provides only a controlling hand, to help choose the best compromise. It follows that the best results are achieved with the best printers.

The text is typed (or loaded) into the editor with no regard for the final layout. It is edited and spell checked using all the normal features and speed of BrunWord 6128. When this is done, a set of layout commands are placed at the start of the text. With these commands the text can be printed anywhere and everywhere on a sheet, just so long as the facilities used are available with your printer. Boxes and line can be drawn and different fonts can be downloaded to print in different type faces.

The idea is that the user will create several page layout patterns (or use the ones supplied) and then only need to worry about typing and editing the text. The screen will not show the actual layout, if it did it would be painfully slow and would not achieve the ultimate quality.

BrunWord Elite has all the features of BrunWord 6128 (except encryption), all the features of Info-Script and seven 24 pin fonts (four fonts in different sizes). It is supplied with a printer lead and an 8 bit printer status port which allows the programme to interrogate the printer. Printer OFF, No Paper, OFF Line, ON Line are the status messages that keep you informed dynamically of the current printer condition.

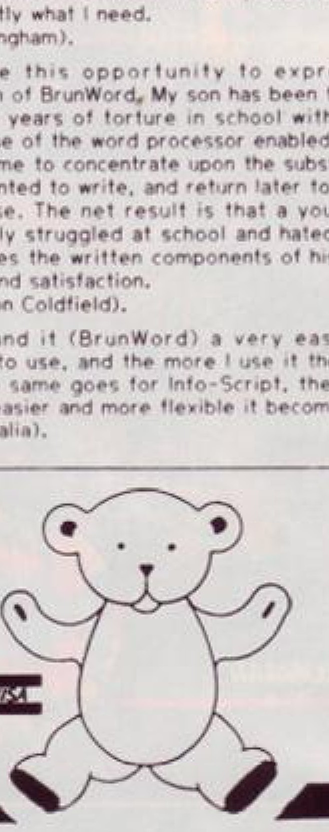
BrunWord Elite works with any Epson compatible printer, which means ALL modern dot matrix printers. At the bottom end, even the simplest 9 pin printer will be able to print in up to six columns. If the printer has IBM codes (as well) then simple lines and boxes can be drawn, and if the printer has reverse line feed, then text can be printed anywhere and everywhere on a page.

At the top end a 24 pin printer will be able to use the fonts supplied with the programme, print boxes and lines by specifying size and line thickness, and use micro justification with proportional text.

BrunWord Elite printed this advertisement, except for the layout around the teddy. The text, lines and price list were printed on an A3 sheet, then the teddy and address layout were pasted on and the sheet was photographically reduced to A4. (The large heading had extra help). We would have difficulty explaining to a third party how to lay out an advertisement of this complexity. As it was, it was just one days work to write the new words and produce the camera ready copy. Compare this to our previous advertisement to see all the changes. Section have been re-written, moved and then tailored to fit the columns by changing the font size and fine tuning the line spacing.

BrunWord Elite is now ready but we expect demand to exceed supply in the first few months.

Send cheque/PO/Access number/Visa number to:



Brunning Software

34 Helston Road,
Chelmsford, Essex, CM1 5JF
Telephone (0245) 252854 (24 Hours)

BrunWord 6128 with BrunSpell & DataFile. . .	£30.00
BrunWord 464 with BrunSpell & DataFile. . .	£25.00
BrunWord Junior 6128 with BrunSpell.	£18.00
BrunWord Elite 6128, Info-Script & BrunSpell. .	£90.00
Info-Script 6128 with BrunWord & BrunSpell. .	£50.00
100 Letters (needs Info-Script).	£15.00

BrunWord Elite and Info-Script include backup disc.
(All supplied on 3in Disc - state which computer)

All prices are inclusive for UK. Overseas orders sent insured air mail - Europe add £2.50 : Rest add £7.50

Programmers' heaven?

NIRVANA

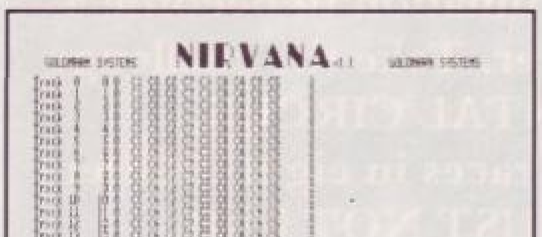
Goldmark Systems ● £15 disk, £26 ROM ● Tel: 0707 271529

Goldmark Systems has produced copier/editor/archiver that promises much. But does it deliver? ADAM WARING finds out...

Since the introduction of the recent copyright act, Goldmark Systems has dropped its more dedicated 'cracking' utilities, and is pitching its hopes on *Nirvana*, a powerful disk managment program with a multitude of features.

Nirvana is still capable of backing up commercially protected software, but instead of making a song and dance about this legally dubious capability, it's mentioned almost as if it's an undesireable side-effect. Goldmark is juggling a hot potato. *Nirvana* has to be able to copy commercial stuff – everyone copies something at one time or another, even if it is for legitimate back up purposes – but Goldmark also has to be seen as obeying the new regulations.

The program has been on sale for some time, but the revamped package now includes various sector and directory editors, as well as an archiver program. On loading, you are presented with a menu listing the seven options. The first being the original *Nirvana* program itself, followed by the additional bolt-on utilities.



● The Disk Copier

The *Nirvana* option is the guts of the package. All the copying, formating, erasing, renaming and similar disk operations are handled here. The main area of the screen shows a list of all the files on the disk – it's a kind of super-catalogue, with additional information about file attributes and user numbers. A small section at the bottom of the screen shows a line of system status containing such valuable information as free disk space, number of files selected and the disk format type. Below this is a list of available commands, easily accessible with single keystrokes.

The cursor is moved around the top section of the screen by means of the cursor keys. Files are selected and de-selected with the copy key. Multiple selection is easy, allowing many files to be operated on at once.

Files can be copied singly or in groups. A group of files are copied into memory *en masse*, and then dumped onto the source disk, saving a lot of tedious disk swapping.

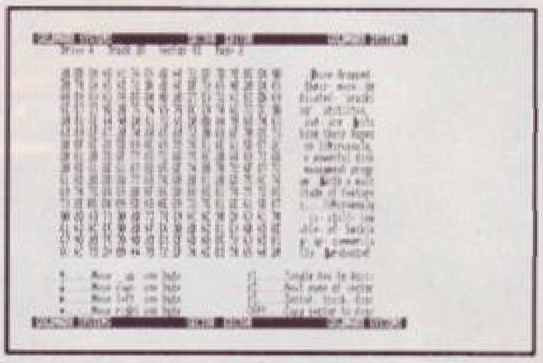
The disk copy option is very powerful. It will handle all types of weird formats, corrupted sectors and the like. Although this could be used to pirate games, it's also very useful if you corrupt a disk and want to mess around trying to retrieve the data without causing further damage to the original. A valuable feature for 128k users is that any additional memory available is used by the utility to increase the storage capacity for the data being copied. This means only having to swap the disk over two or three times.



● Nirvana is an invaluable tool for the dedicated meddler.

The disk formatter is extremely fast, only taking about 18 seconds – much faster than the standard CP/M utility. Disks can be formatted to both data and vendor formats.

Group erasure and renaming becomes a doddle. Files are selected and, in the case of Rename, the appended filenames are entered – then the task is undertaken by the program. File attributes are allocated with equal ease, and can be toggled from read/write to read only, and can be made invisible to the catalogue.



● Hacker's delight – the Disk Editor itself.

Three programs of the type that make the hackers' knees tremble with delight are also included on the disk. A directory editor lets you recover unerased files (and overlaps somewhat with the functions of the main package). The disk map displays some meaningless (apparently) information about what tracks and sectors your files are stored on. The sector editor is best of all. This lets you rip apart programs, hunt for the the infinite lives pokes, find the obscene messages that programmers invariably leave behind, stick your name all over the high score table and change US Gold to UK Mould.

The most useful addition to the package is the Archive option. This works in much the same way as a hard disk backup onto a tape streamer. The whole disk can be backed up onto tape to be retrieved at a later date. This fantastic option offers a cheap mass backup storage system on ordinary audio cassettes, which can be filed away and forgotten about until the worst happens and your disk gets trashed.

It takes a fair amount of time to archive a whole disk to tape – about a quater of an hour or so to be exact – but that isn't bad when you consider that there's 180K or so of data being saved.

Thankfully, all you need to do is insert the disk and set the tape to record. The machine will do the rest for you, so you're free to make a cup of tea, have a bath, go out for a night on the town etc, whilst the whole operation is taken care of.

On the whole, *Nirvana* is easy to use and has some neat features. Against that, however, you get the impression that the whole thing has been botched together. These minor grumbles aside, it's an excellent package.

GOOD NEWS

■ **An extremely powerful selection of software...**

BAD NEWS

■ **...that could have been put together with a bit more polish**


Virgin Games.
CONTINENTAL CIRCUS
AMIGA
ATARI ST
CBM64/128
SPECTRUM
AMSTRAD
Prove to the racing world that you have the guts and determination to become a Formula One Driver. Take the challenge of the CONTINENTAL CIRCUS, consisting of eight races in eight different countries. YOU MUST NOT FAIL!
available on
AMIGA £19.99
ATARI ST £19.99
C64 CASS £9.99
C64 DISC £14.99
SPECTRUM £9.99
SPECTRUM +3 £14.99
AMSTRAD CASS £9.99
AMSTRAD DISC £14.99
Licensed from ©Taito Corp., 1988, export outside Europe and Australasia prohibited.
©1989 Virgin Mastertronic Ltd.
Produced by The Sales Curve for Virgin Mastertronic.
2-4 Vernon Yard, 119 Portobello Rd, London W11 2DX

RSX-LIB

£19.95 disk only
Smogware Systems ● 20 Grove Avenue, New Costessy, Norwich, Norfolk NR5 0HN

Accessing machine code routines from a BASIC program isn't exactly the easiest of tasks, having to memorise all those meaningless hex addresses with which to call the programs – one teeny mistake and it's mega crash time.

Resident System eXtensions – RSXs for short – provide part of the answer, in that routines can be given user-friendly names that mere mortals can understand. The machine code routine is called by typing the routine name with a | prefix. |FADE is far more understandable and readable than CALL &8D6C. All that's needed is someone to write these things in the first place. Unfortunately from a machine code programmer's point of view, RSXs can be a real pain in the assembler. Address tables of a complexity previously unheard of need to be defined, and besides, unless specially designed to do so, different routines are likely to occupy the same area of memory, making it impossible to install several at once.

Smogware Systems may have the answer in the form of *RSX-LIB*, a utility that lets you put together a collection of RSXs from ordinary machine code routines. In addition, it will relocate the different routines in a neat, orderly fashion, resulting in a personalised selection of routines in one file that can be called as required.

Fifty or so ready-made RSXs are included on the disk, but they consist mostly of standard system calls and are nothing to get excited about.

To test the program we wrote five simple routines on *Pyradev*, assembled them, and called them from BASIC in the usual manner to prove they worked. Once everything was hunky-dory, we loaded *RSX-LIB* and began to get them ready for compilation.

The first thing to be done was to add information about the routines to the library. This is where we encountered the first problem. *RSX-LIB* will only compile information about one RSX at a time, not in groups. The object code of our five routines was stored in sequence in one file, and had to be split up before the parogram would handle it. Once this was done, we could successfully add them to the library.

After adding each entry the program exited back to the main menu, which made entering the five codings a bit tedious. Added to this, the program was quite slow, with the user having to wait for the program to catch up while it was drawing screens.

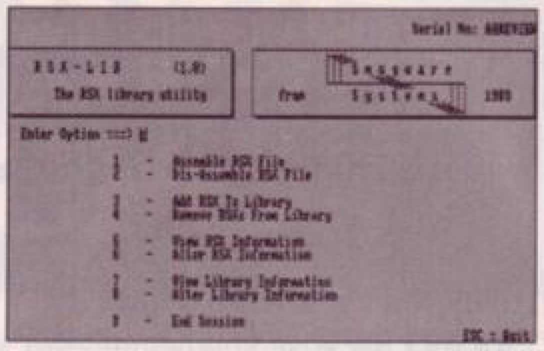
Once all the details are safely in the library then it's time to put the group of RSXs into a file. A list of all the available RSXs is displayed, along with which disk to find them on. The five we had written were selected and the program made to do its stuff. A file was created and the start up sequence was advised – a line of BASIC used to load and initialise the the RSXs:

```
MEMORY HIMEM-233:LOAD
"aa.rsx",HIMEM+1:CALL HIMEM+19
```

RSX-LIB was exited, and our RSX file loaded and initialised. With bated breath and shaking hands we nervously typed |invert...

Success! all our routines worked a treat. Instead of all those horrid addresses to remember, we could call our routines at the drop of a word. Spurred on we assembled the routines all at the same address to see if that would fool it. It didn't even flinch, creating a file exactly the same as before. The manual states that most routines can be re-located, although it may have trouble with particularly complex routines.

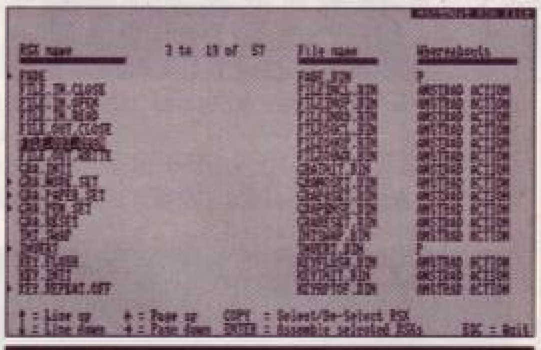
RSX-LIB is great if you program in any way shape or form. If you're a coder then it makes creating RSXs a dream. If you're more of a BASIC (and down to earth) sort of person, and you want to use routines published in type-ins and the like, then you'll be equally well suited.



● The main menu.



● Entering details of the code into the library.



● Selecting a batch of files to assemble.



LISTING

RSX-Lib **Converts code like this into easily accessible RSXs.**

```
                    org  #8000
8000 2100C0 invert  ld   hl,#C000
8003 7E     invl    ld   a,(hl)
8004 2F             cpl
8005 77             ld   (hl),a
8006 23             inc  hl
8007 7C             ld   a,h
8008 A7             and  a
8009 20F8           jr   nz,invl
800B C9             ret
800C 2101C0 lscroll ld   hl,#C001
800F 1100C0         ld   de,#C000
8012 010040         ld   bc,#4000
8015 EDB0           ldir
8017 C9             ret
8018 11FFFF rscroll ld   de,#FFFF
801B 21FEFF         ld   hl,#FFFE
801E 010040         ld   bc,#4000
8021 EDB8           lddr
8023 C9             ret
8024 0608   fade    ld   b,8
8026 2100C0         ld   hl,#C000
8029 ED5F   fad2    ld   a,r
802B A6             and  (hl)
802C 77             ld   (hl),a
802D 23             inc  hl
802E 7C             ld   a,h
802F A7             and  a
8030 20F7           jr   nz,fad2
8032 CD14BC         call #BC14
8035 C9             ret
8036 FE04   sprite  cp   4
8038 C0             ret  nz
8039 DD5607         ld   d,(ix+7)
803C DD5E06         ld   e,(ix+6)
803F DD6605         ld   h,(ix+5)
8042 DD6E04         ld   l,(ix+4)
8045 DD4602         ld   b,(ix+2)
8048 DD4E00         ld   c,(ix+0)
804B C5     sprloop push bc
804C D5             push de
804D 0600           ld   b,0
804F EDB0           ldir
8051 D1             pop  de
8052 C1             pop  bc
8053 EB             ex   de,hl
8054 CD26BC         call #BC26
8057 EB             ex   de,hl
8058 10F1           djnz sprloop
805A C9             ret
```

GOOD NEWS
- Does what it sets out to extremely well.
- Easy to use.

BAD NEWS
- A touch more speed wouldn't go amiss.
- Routines must be compiled one at a time.

The sprite stuff!

Why can't you write games in BASIC? Because you haven't got *Sprites Alive*, that's why! ADAM WARING tells all...

SPRITES ALIVE

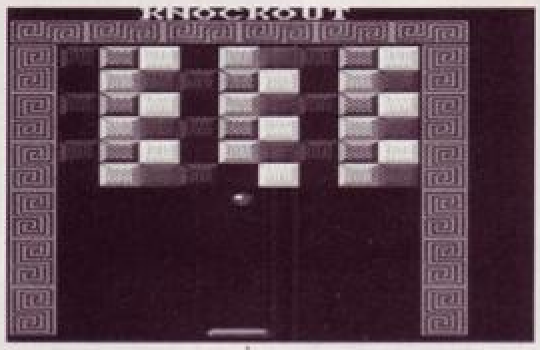
£22.95 disk only ● Glenco Software, 15 Alford Lane, Whitehouse Farm, Stockton on Tees, Cleveland TS19 0QP

Locomotive BASIC, supplied on ROM in the heart of your machine is generally considered to be a very good all-round version of the language. However, when it comes to more specialist applications, such as games writing for example, it's less well equipped than it could be.

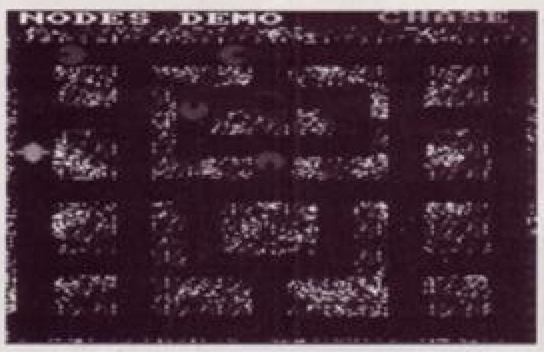
Glenco Software is aiming to rectify this with its extended games BASIC, which adds extra commands designed to make the inclusion of animated graphics and all things spritely a doddle for the BASIC programmer.



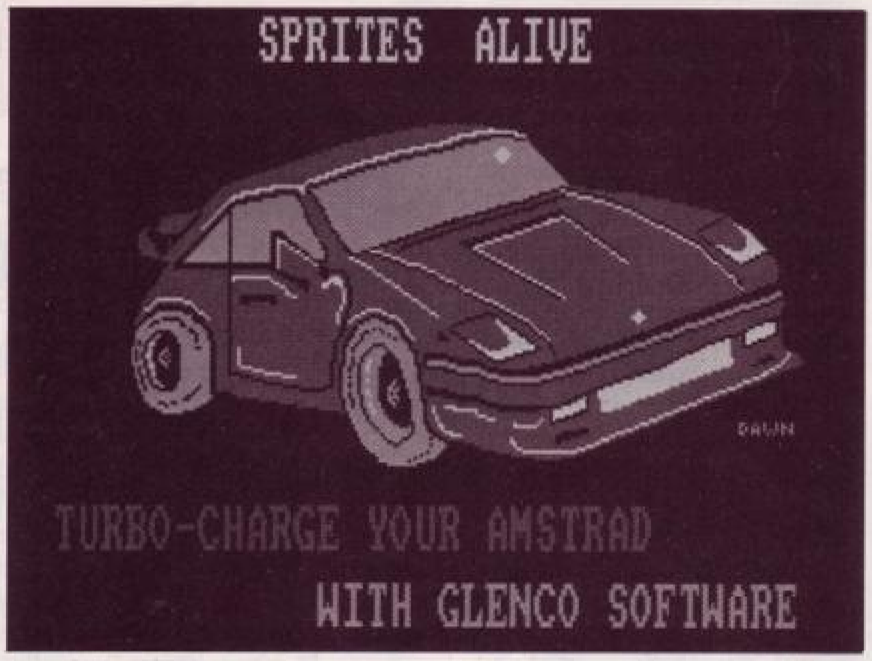
● This tiny listing is all that's needed to produce the *Pac-man* demo.



● Knock-out! The oldest game of all re-created with *prites Alive*.



● Pac-mania! A basic framework of the Atari classic is included.



Sprites Alive gives you around 70 extra commands to use from BASIC. The firmware's built-in RSXs are used to execute the extra instructions, meaning that they are accessed with simple keywords rather than complicated calls. Up to 64 multi-coloured sprites can be on-screen at once, and can all be animated and moved with automatic collision detection.

Six fairly average demos are included on the disk. These are intended to demonstrate the different aspects of the program, rather than making any claims of being Mastergame status. They are best put to use by hacking into them with the intention of examining and experimenting with the commands to learn their usage. The two most interesting are partially complete games, which can be amended and improved to make custom games of *Breakout* and *Pac-Man*.

The manual is a pretty hard slog to get through. After a couple of pages by the way of introduction, it launches straight into the nitty-gritty business of explaining the complicated instructions. A tutorial approach would have been the preferred method, guiding the reader gently though examples with the technical explanations in a reference section. No matter though, it was a struggle, but we got there in the end.

You're faced with a chicken and egg situation when sitting down to write your first program. The package requires that you draw out the sprites before you can start writing your masterpiece, but without having any experience of using the package you don't really have a clear idea of the graphics you're going to need. Besides, you don't want to bother with all that tedious messing about designing sprites, you want to get on with the serious business of writing your mega-game. The compromise is to start with one of the demos, borrowing its sprites and changing the listing till it becomes almost all your own work.

CATCHING UP

***Pandora* is the direct competition, and it goes about solving the same problem in a different way. Whereas *Sprites Alive* uses RSXs to invoke the extra commands, *Pandora* has its own cut-down compiled BASIC, giving your programs greater speed, but not as much flexibility. Glenco is presently working on a compiler (34.95) to work with *Sprites Alive*, thus catching up speed-wise whilst retaining the flexibility advantage.**

The company also plans to sell a cut-down package with all the RSXs cut out for machine code programmers to incorporate the code directly.

It's when you do this that you realise just how powerful *Sprites Alive* really is. A relatively short BASIC listing produces a great deal of action. Most of the processing is handled by the extra commands, with your BASIC program just serving as a means of linking them together.

You won't be able to write anything of commercial quality with *Sprites Alive*. It's a bit too limited and slow for that. You could have great fun designing games to baffle your pals with though, but a good amount of programming know-how is required, as you firstly need to be competent in BASIC, and secondly some of the programming structures used are quite complicated.

GOOD NEWS	BAD NEWS
■ Very powerful	■ It won't produce stunning games
■ Reasonably priced	■ Not lightning-fast

3.5" DISC DRIVE FOR THE CPC

SPECIAL OFFER....SAVE £15 ON ALL DRIVES

MEGADRIVES

The SIREN MEGADRIVE offers exceptional value to users who have a need for more on line disc storage than is normally offered by Amstrad's own 3 inch drive. The MEGADRIVES are 1 inch high 3.5 inch low power consumption citizen drives. They are contained in a steel case and come complete with power supply and a cable to attach to the computer. The drives are 80 track double sided and will format up to 850k. In order to make full use of the drive, it is essential to have some software to allow the drive to be recognised. We offer 3 packages, ROMDOS, RAMDOS & RODOS. Please phone for further details if needed.

ROMDOS & RAMDOS

These two programs are essentially the same, the only difference being that ROMDOS is supplied on ROM (and needs to be fitted into a rom board) and RAMDOS is supplied on disc. Both programs will support AMSDOS, CPM 2.2 and CPM PLUS and is very simple to use. If you are using RAMDOS then a short program must be run before you can access the MEGADRIVE. With ROMDOS, the computer is configured when it is switched on. Files can be copied to and from the MEGADRIVE with the CPM PIP program. Both programs come with formatting software and full instructions.

ROMDOS is available on its own at **£29.99**.
RAMDOS is **£19.99** & RODOS is **£29.99**

With RODOS and RODOS EXTRA, it is possible to transfer files to and from an AMSTRAD/IBM PC or ATARI ST.
Please phone for further details.



MEGADRIVE

RODOS

RODOS is supplied on ROM (and needs to be inserted into a ROM board) and offers many unique features to the CPC user. It will automatically configure drive B on switch on, it offers a silicon disc & printer spooler (6128 only), upto 3 times faster disc accessing, tree directories, disc formatter and file copier. RODOS fully supports AMSDOS, but will not work with CPM 2.2 or CPM PLUS. RODOS is ideal for the experienced user, however if it is just a large capacity second drive that you need, we recommend ROMDOS or RAM-

MEGADRIVE with RAMDOS	£109.99
MEGADRIVE with ROMDOS	£119.99
MEGADRIVE with RODOS	£119.99
RODOS EXTRA	£9.99
BLANK 3.5 INCH DISCS	£1.00
ROMBOARD (holds 6 roms)	£24.99

Siren Software

84-86 Princess Street
Manchester M1 6NG.
Tel: 061 228 1831.

Please complete this form and send it with cheques payable to **SIREN SOFTWARE.**
For Access/Visa orders, please telephone 061 228 1831

NAME .... **COMPUTER** ....
ADDRESS ....
....
....

SEND TO:- Siren Software, 84-86 Princess Street, Manchester, M1 6NG.

PLEASE SEND ME:-

- ❑ Megadrive + ROMDOS £119.99
- ❑ Megadrive + RAMDOS £109.99
- ❑ Megadrive + RODOS £119.99
- ❑ Rodos Extra £9.99
- ❑ Rombox (holds 6 roms) £24.99
- ❑ 10 3.5" Discs (Blank) £10.00
- ❑ U.K. Postage £3.00
- ❑ European Postage £6.00
- ❑ Airmail Postage £17.50

FORUM

Got a problem? ADAM WARING's your man.

●You can talk

Owners of the DK 'Tronics Speech Synthesizer will know that the manual tends to avoid the subject of speech output from machine code. It mentions the use of I/O address &FBFE, but there is an easier way to do this using a short assembly listing.

```
        ORG     &6000
        LD      DE,MESS
LOOP    LD      A,(DE)
        OR      A
        RET     Z
        CALL    &BB5A
        INC     DE
        JP      LOOP
MESS    TEXT    "' text here '",0
```

Pressing SHIFT and '7' gets the apostrophe ('), which should be used both at the beginning and end of the string. The '0' at the end terminates the message.

Would you let other readers know that if they have problems with any aspects of computing (except electronics!) then I would be glad to help them if possible.

Andrew Price
Dunstable

Well done that man! I am passing your full address over to appear in next month's Helpline.

●Printer choice

I own an Amstrad CPC464 which I use mostly for games, but would like to use for letter writing. What printer would you suggest I buy in the £100-£200 price range? I will also need a word processor. Is *Mini Office* any good, and is it compatible with your recommend printer?

M Mitchell
Welwyn



I agree – from the look of your handwriting you do need a word processor! The buyers guide towards the back of AA lists several recommended printers that we have reviewed. In particular you should look at the Citizen 120D, the Panasonic KXP1081, the Mannesmann Tally MT81 and the Star LC10. All are propriety brand products, and can be bought for less than the manufacturers' RRPs. Rummage through the pages of our sister publication New Computer Express *to find them advertised at truly knock-down prices.* Mini Office *should fill your needs admirably. It includes a whole suite of programs in addition to the word processor, and is a bargain at £14.95 on tape.*

●Pressing the big red button

My son, Farhan, has a CPC 6128, cassette recorder and Multiface 2. When he presses the red button on the Multiface he says that the menu comes up properly, but the cassette motor automatically switches on, which he thinks should not happen.

Is there a solution to this, or is it just a bug in the Multiface?

Jenny Masini
York

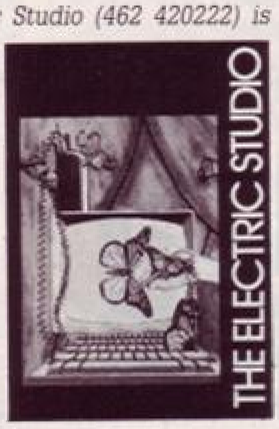
How bizarre. Sounds like some kind of edge connector problem. Try cleaning the edge connector with methylated spirits. If that doesn't fix it, and nothing else untoward happens, then I wouldn't worry about it.

●Light entertainment

I own a CPC464 with built-in cassette and have a great interest in art software. I've been trying to get hold of an art package on cassette that can be printer dumped, but have ended up at a dead end. What has happened to the world of cassette software?

S J Goodfield
Portsmouth

Light Pen *by Electric Studio (462 420222) is what you need. For £19.95 you get an excellent utility which will produce the screen dumps you require, and comes with the bonus of a light pen to aid your artistic ability.*



●Erase

I own a Multiface 2, and I recently saved a tape onto disk using it. It was, however, a faulty tape load, and CPM doesn't recognise the file as it doesn't have an extension ending the filename. Therefore I can't erase it, and have a 60K plus rendered useless on my disk. How can I erase these files?

Hugh O'Conner
Dublin

Your best bet is to copy the remaining working files onto another disk, and reformat the original. It's possible that you could retrieve the space using a disk editor, but I would recommend that you always back up a disk before tinkering with disk sectors.

●Rotten cheat

I am writing to offer my help on improving *Easi-Sheet* given free on the 4th birthday tape. If you type 3390 RETURN and save it, you will avoid the error checking routine at the beginning. Also, there is a bit of a bug in the routine called when pressing TAB. This can be rectified by typing 800 GOTO 2780.

The Daleks game, also on the free tape, can be made easier by having infinite Sonic Screwdrivers. Type 1280 RETURN.

James Griffiths
Dyfed

Not only would infinite screwdrivers make the game easier, it would make it utterly pointless!

●I shudder to think

I would be grateful if you could offer some advice on using an Epson LX-800 printer with my 6128. The printer's demonstration mode is satisfactory, but I cannot get the computer to communicate with it. Sending a print command through *TasWord* gives the Epson a slight shudder, but so far no text.

I Looker
Dorset

Strangely enough, poor old Trenton had the same problem this very morning. The silly duffer was using a broken printer cable. Firstly, make sure that the CPC end of the cable is connected the right way round – you won't do any damage if you put it in the wrong side up, so try it. If that doesn't bring any joy then you'll have to get yourself another cable.



50 GOOD REASONS TO SHOP AT CRAZY JOE'S

10 Computer Hits 5	£4.99	North Star	£2.99
10 Great Games 2	£6.99	Pacland	£4.99
10 Great Games 3	£6.99	Pacmania	£4.99
3D Chess	£0.99	Ranarama	£1.99
3D Pool	£6.99	Roland in Time (464)	£0.99
4 Soccer Simulators	£4.99	Roy of the Rovers	£1.99
Alien 8	£0.99	Runestone	£1.99
Auf Weidersehen Monty	£1.99	Sailing	£0.99
Bard's Tale	£2.99	Scruples	£4.99
Basil-Mouse Detective	£1.99	Sorceror Lord	£4.99
Biggles	£0.99	Star Raiders 2	£0.99
Blood Brothers	£2.99	Star Wars	£3.99
Blood Valley	£1.99	Starglider (Disc)	£6.99
Centre Court (464)	£0.99	Strip Poker 2+	£3.99
Convoy Raider	£1.99	Thing Bounces Back	£1.99
Enlightenment-Druid 2	£2.99	Through The Trap Door	£0.99
Final Matrix	£1.99	Thunderbirds	£5.99
Geoff Capes Strongman	£0.99	Titan	£4.99
Gothik	£1.99	Trio Hit Pak (3 Games)	£2.99
Grand Prix Selection	£4.99	West Bank	£2.99
Hacker 2	£0.99	Wizard Wars	£1.99
Hunt for Red October	£6.99	Konix Navigator	£12.99
Impossaball	£2.99	Konix Speedking	£8.99
Knight Ork (3 Adventures)	£6.99	Maxell CF2 3" Discs (10)	£22.50
Mega Apocalypse	£0.99	Quickshot Wizmaster	£10.99

Crazy Joe's, Dept. AA, 145 Effingham St., Rotherham, South Yorkshire S65 1BL

Visa and Access Orders Taken on **(0709) 829286**

Please make Cheque/P.O. Payable to **"Crazy Joe's"**

P&P **FREE** in U.K. on orders of £5 or over. Under £5 please add 50p. Europe (inc. Eire) add £1 per item. Rest of World add £1.50 per item.

If we don't stock it, you probably don't need it!

ALL COMPUTERS SOFTWARE & ACCESSORIES

MAXELL 3" CF2 DISKS (10)	£22.95	
24 PIN PRINTERS	Only £299	SEND FOR
MP2 6128/464 TV MODULATOR	£29.95	FREE!!!
256K SILICON DISK 464 or 6128	£75	20 PAGE
CPC AUTOFIRE ADAPTOR	£5.95	PRICE LIST
AMS 30L LOCKABLE 3" BOX	£12.95	

24 Hour Customer Order Hotline: 051 630 3013

MICROSNIPS LTD

Making Technology Work for You...

37 Seaview Road, Wallasey, Merseyside L45 4QN.

Tel: 051 630 3013 051 630 5396 051 691 2008. Fax: 051 639 2714

POSTAGE AND PACKING: Items under £50 add £2 Items under £100 add £5 *Items over £100 add £10 *UK mainland - courier delivery Add 5%
EUROPEAN CUSTOMERS: Full price shown will cover carriage and free tax
OVERSEAS CUSTOMERS: Add 5%

HSV COMPUTER SERVICES LIMITED

23 Hampstead House, Town Centre, Basingstoke RG21 1LG (AA)

ALL OUR PRICES INCLUDE CARRIAGE & VAT

Personal Organiser Stationery
85gsm
£7.95
for 250 sheets

Stationery . . . Stationery . . . Stationery . . .

	500	1,000	2,000
9.5" x 11" 60gsm Micro-Perf all edges	-	£9.50	£15.95
True A4 70gsm Micro-Perf all edges	£8.50	£12.95	£23.95
True A4 90gsm Micro-Perf all edges	£9.75	£14.95	£27.95
True A4 100gsm Micro-Perf all edges (coloured - Cream, Blue, Grey or White)	£16.95	£31.95	-

Dust Covers

*CPC 464 2pce set	£7.95
*CPC 6128 2pce set	£7.95
DMP 2000 Printer Cover	£4.95

**State Mono or Colour*

	1,000	2,000	4,000
Labels 3.5" x 1.5" (1 across)	£5.25	£9.50	£17.95
Labels 3.5" x 1.5" (2 across)	£5.75	£10.50	£19.95
Labels 4.0" x 1.5" (1 across)	£5.75	£10.50	£19.95
Labels 4.0" x 1.5" (2 across)	£6.75	£11.95	£22.95
Labels 2.75" x 1.5" (3 across)	£4.75	£8.50	£15.95

Printer Ribbons

DMP 2000/3000 Black	£2.95
DMP 2000/3000 Colours*	£3.95

**Colours Available are:- Red, Blue, Green, Brown.*

AMS 30 Lockable Disk Box

Will hold 30 uncased 3" disks or 15 cased 3" disks

£14.95

Credit Card Hotline (0256) 463507

Faxline (0256) 841018

Access BARCLAYCARD VISA

Amsoft 3" disks (uncased): One £2.85; Five £13.50; Ten £25.95

Maxell 3" disks (uncased): One £2.50; Five £11.95; Ten £22.95

Maxell 3" disks (cased): One £2.85; Five £13.50; Ten £25.95

Orders under £8 in value carry a small order charge of £2

●Saving face

On reading last month's *Forum* (*AA*50), I noticed a tip from Hugh Gammon giving instructions on how to save only the first 64K of memory when saving a game through Multiface. In my experience there is no need to go into 'Tool Kit' mode, all that is required is to press the 'clear' command and save straight away.

J Regan
Spaling

I hope that clears thing up!

●Assembly time

Which assembler do you advise me to get? At the moment I am using RAW, but quite simply, it's useless. I don't know whether it is my version but it can't handle anything to do with IX, IY, and the OUT commands. It even occasionally throws a wobbly at a label. As you can see, a new assembler would do nicely. It would be nice if it could cope with the hidden instructions.

How much would it cost to fix a DD1 and monitor? The drive clanks and the monitor has squiggly lines over the screen.

Paul Reilly
Glasgow

The PDS assembler is an extremely powerful system with an extensive monitor and fast assembly time – typically less than ten seconds. In addition to the £500 price tag, you will also need a small add-on called an IBM PC. Slightly cheaper is Maxam II, *which should meet all your requirements.*

I have no idea how much it would cost to mend your equipment. Why don't you try getting a quote from a computer repair shop?

●Cutting remark

Regarding the "Between the lines" article in *AA*50, if you're a *Protext* user and you have this problem, but don't want to cut up your cable, then here is a less 'dangerous' solution.

Get into command mode, type "sp", press enter twice, type "Y", hold down control and press "j", and finally press 0 followed by RETURN. You have just redefined the control j character, which will clear up the double spacing problem.

Edward Hieatt
Cambridge

Thanks Edward. Users should note that this will only work from Protext. *BASIC and other applications will still produce the double lines.*

●Joining the Elite

Thank you very much for the splendid article on *Tasword*. It was a great help to a novice like myself and I thoroughly enjoyed customising the program. One thing I would like more advice on is how to automatically produce letters in elite type. Tom mentions that it is possible but doesn't explain how.

Talking of *Elite*, can you offer any help any newcomers like me who have bought the game on the supreme challenge disk. Unfortunately your cheat pokes do not work for this version as it has a different loader. Are any of your readers able to oblige – if not I doubt that I'll ever progress beyond pathetic!

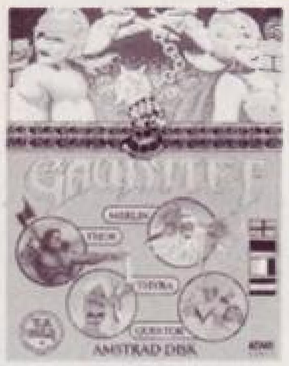
John Marsh
Orpington

I believe the second part of Tom's article – which appears elsewhere in the magazine this month – covers your first query.

Calling all Elite Clubbers... Commander Marsh in distress...

●Fast loader

I am having problems with my cassette unit. Games like *Purple Saturn Day*, *Gauntlet* and many others sound 'fast' when you listen to them and won't load on my 464. I get either read error b, or the game won't identify itself at all. Is my cassette motor too fast? Can I mend it myself or should I get a repair company to fix it for me?



Adam Nenwick
Scarborough

It sounds like one of two possibilities to me. Hopefully your machine has dirty heads or is misaligned. Tapes saved normally would perhaps load, but fast loaders (hence the strange sound) would be less tolerant. Clean the heads as shown in AA50. The alignment can be adjusted by using a watchmaker's screwdriver inserted into the small hole on the top of the unit (near where the cassette door opens). Rotate the tiny screw a fraction of a turn with a tape playing until the sound is better.

The other possibility is that your tape recorder is in fact broken. It may be that the rubber drive band has become worn, in which case you'll need a replacement and a few hours with a screwdriver. If the problem is one you can't deal with yourself, then any local radio repair shop should be able to do the trick, with it being the cassette mechanism rather than the computer itself.

●Any colour but green

I want to purchase a colour monitor for my CPC. At present I have a green screen, but find it difficult to play certain games on it. Can you offer me any advice on what to do?

Martin Van
Chelmsford

The CPC will work with most of the standard RGB monitors. The problem is that it takes the power directly from the monitor, so you'll either have to keep the green screen plugged in for the power, or get a separate power supply. Amstrad's MP2 modulator has a built-in power supply which you could use in conjunction with the monitor, but if you want the colour just for playing games with, the why not use the modulator with a TV set?



●No escape

Is it possible to disable single keys such as ESC to prevent people getting listings from your programs that you don't want copying?

Robin Marlowe
Chepstow

There is probably a poke somewhere or other to disable the escape key, which I've know doubt that one of our ever helpful readers can supply. In the meantime, you can protect your BASIC programs by saving them with a protected loader. This doesn't actually disable the key, but clears the program from memory when it's pressed, having much the same effect in preventing people listing the program. Save your BASIC program with:

```
SAVE"filename",p
```

●Remote possibilities

I am trying to get my 6128 to control external circuits (switching lights and motors on and off for preset periods).

I could do this by connecting the remote switch through a suitable relay, but I can't get the remote to work other than by "pressing any key" after a tape cat or play command. Is there any way I can bypass this stage from within the program?

I am trying to record some of my computer pictures on video tape via the MP2 modulator using RF output. Although the TV picture is fine, the recorded picture quality is terrible. Can you suggest anything? My VCR has only RF and BNC video-in connections.

M Pike
Portsmouth

The remote port is controlled from I/O port &F600. Use OUT &F600,16 to switch it on, and OUT &F600,0 to switch it off.

As for your other problem, I can offer the reason, but not the solution. The modulator turns the nice clean RGB signal into a form the TV can understand, and your video recorder turns that signal into composite video to be recorded on the tape. When you play it back it is again converted from composite video to RF, so the computer's display is going through several processes, losing quali-

ty each time. What you need to do is mix the RGB directly into composite video, but I don't know if anything is available to do this. Perhaps someone can help?

●A picture's worth a thousand words

I would be grateful if you could tell me how to load screens drawn on an art package without the loading message appearing on top of it.

Simon Cartwright
Worksop

Pictures can be loaded from BASIC without corrupting the screen by putting an exclamation mark at the beginning of the string. For example, if your drawing was called "SCREEN.SCR" you would load it with:

LOAD"!SCREEN.SCR",&C000

●Speak my language

Certain listings appearing in *Type-ins* incorporate commands such as 'GRAPHICS PEN 1' or 'FILL 1', which my computer doesn't make any sense of. Could you please tell me what's going wrong?

Paul Nicholls
Hailsham

Using my brilliant deductive powers, I can tell that the computer you have is – let me see now – a 464. The 6128 has an upgraded ROM containing a few more BASIC instructions than its predecessor. Listings with limitations as to what machines they will run in are now marked in the Type-ins *section.*

●The sixty-four thousand byte question

I have an Amstrad CPC464 and would like to know whether games such as *Dragon Ninja* and *Target Renegade* will load all the code in one go if I upgrade my machine with a DK'tronics 64K ram-pack?





If not, how do I upgrade my machine to be compatible with a 6128?

Ian Fisher
Weymouth

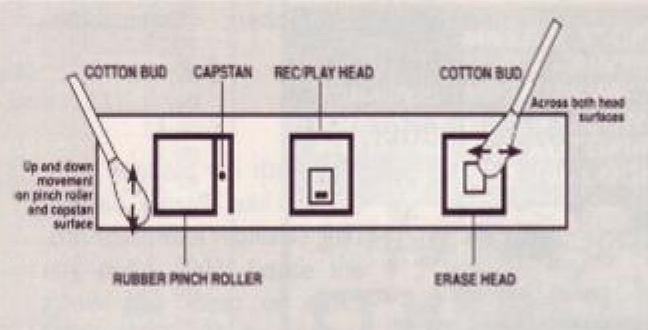
Generally yes, it will work with most commercial software. It depends on how much the software involved 'follows the rules', and a few games may not work. Add a 6128 ROM (contact CPC – 0722 555034) in addition to the 64K memory for full compatibility.

●A load of errors

I have a CPC464 that I have had for three years and have bought quite a few games for, but now I am finding that some new games don't load on my computer, although they will on my friend's more modern 464. I was wondering whether it was possible that Amstrad have incorporated other commands into newer models of the machine.

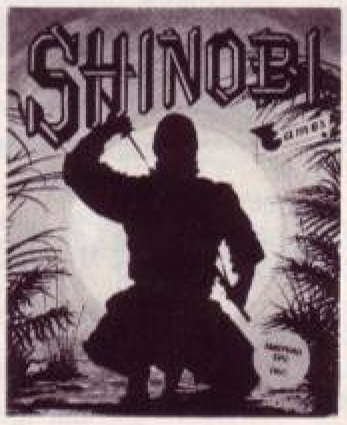
P Rainbow
Shefford

Internally your friend's machine will be exactly the same as yours. The problem is more likely to be three years' worth of grime accumulating on the tape heads. Give them a good cleaning as shown in last month's issue (AA50).



●Hack attack

Whilst hacking away at *Shinobi* the other day I came across something rather interesting. Hidden away at location &4270 is a rather long text message. So, if you have a *Multiface* and *The Insider*, do the following:



Load up *Shinobi*. When the title page comes up, insert *The Insider* into drive A and press the red button. Select TEXT and enter the address as 4270 HEX.

The message occupies the area of memory set aside for the levels, so make sure you do this before they are loaded.

Stephen Trimmer
Bourton Grange

Any other readers discovered interesting hacks?

●Subject to status

After continually fooling around with my computer I have found out some information that may be of use to your readers.



When a file is set to read only status the file can't be erased, but do you know how it works? Well I do!

The first byte in the filename extension has &80 added to it. For instance, the filename 'FIND.COM' would have the &80 added to the 'C', signifying read-only. Similarly, a file set to system status – making it invisible to the directory – adds &80 to the second letter, in this case the 'O'.

CP/M has a command called STAT, which is very useful in file doctoring. You can use this utility to examine the files and change them as you wish.

Andrew Price
Dunstable

The present status, Andrew, is that £10 will be winging its way to you shortly.

●MIDI mayhem

I know that the sound output from the I/O port can be enhanced by connecting it through a hi-fi, but is it possible to make something that could turn the signal from the port into a signal suitable for a MIDI-compatible keyboard?

J Carrigan
Horsham

No. The I/O port is only capable of outputting analogue sound signals. MIDI, on the other hand is a digital system, sending instructions and information about sound rather than the sounds themselves. To use MIDI from the CPC you will need to buy an interface that plugs into the expansion port. See Mastering Midi *in last month's issue (AA50) for more information.*

●Spectrum conversion

My kids have twisted my arm and I'm committed to retirement of the Spectrum in favour of an Amstrad CPC.

As a hard-up dad I should like to know whether the Speccy tapes can be put onto disk for use on the Amstrad.

F Chesters
Brampton

Firstly, congratulations on your decision to get a CPC. It's a great machine which beats the Spectrum hands down.

The bad news is that it won't load Spectrum software. The two machines use a totally different way of reading programs from tape, and besides, Spectrum software is not designed to take advantage of the CPC's far superior capabilities.

●The Modulator approach

I'm confused. I am thinking of buying a modulator for my CPC464. In the manual it says that I need to use the MP1 modulator. I've looked at all the advertistments in your magazine, but have only seen advertising for the MP2 modulator. Is it possible to use the MP2 instead of the MP1 on the 464?

Stuart MacNeill
Argyll

The MP2 is an upgraded version of the MP1 modulator, designed to work with the 6128. The only difference between the two s that the MP2 has an extra 12 volt output to power the 6128's disk drive. Your 464 doesn't need this, but will work with the MP2 without any problems.

Cracking the code

Starting this month: a new series on advanced machine code. MICHAEL GLEDHILL takes over where RICHARD MONTEIRO left off, and extols the virtues of tables of values...

Judging by the content of *Cheat Mode*, *Type Ins*, *Forum* etc, it seems like many readers have taken the plunge and learned machine code. But once you've learned the basics, what then ?

Well, before you jump into a 40K multi-mode, multicoloured super-game, consider an alternative. Get some experience.

This series is designed to follow on from *Absolute Beginners*, and, if there is enough positive feedback from it, will go all the way to demonstrating how to write a full-length program without using firmware calls.

Don't, however, expect this series to teach you machine code from scratch. *AA* ran a beginners' series – *First Bytes* – which ran from *AA28* to *AA43*, and rather than re-covering old ground, we're going to leave you to buy those *AAs* from the fabulous *Special Offers* pages at the back of the mag...

Turning the tables

Firstly, you should get used to using tables of values. These can be used to get much faster routines out of your humble CPC.

As an example, how would you go about ploting the top right hand pixel in pen 1, regardless of which mode you're in? In all three modes, &C04F will need to be poked, assuming the screen hasn't been scrolled, but with &40 in mode 0, &10 in mode 1, and &01 in mode 2. The following routine will do this.

```
        CALL &BC11    ;Put the screen mode in A
        LD   HL,&C04F ;Address to poke
        CP   0
        JR   Z,prog1  ;If it's mode 0, jump to prog1
        CP   1
        JR   Z,prog2  ;If it's mode 1, jump to prog2
        CP   2
        JR   Z,prog3  ;If it's mode 2, jump to prog3
        RET
prog1:  LD   (HL),&40
        RET
prog2:  LD   (HL),&10
        RET
prog3:  LD   (HL),&01
        RET
```

It works, granted, but can it be improved upon? Compare this listing...

```
        CALL &BC11      ; First load A with screen mode
        LD   E,A
        LD   D,&0       ; Then make DE hold screen mode
        LD   HL,table
        ADD  HL,DE      ; Now HL=table+screen mode
        LD   A,(HL)     ; Read byte from HL..
        LD   (&C04F),A  ; ..and poke &C04F with it.
        RET
table:  DB   &40,&10,&01
```

This program sets up HL to store the address of the first data byte (&40), and adds a displacement of (screen mode) bytes to HL to ensure HL accesses the correct byte.

In mode 0, the byte at (table+0) is accessed, in mode 1, the byte at (table+1) is accessed and in mode 2, (table+2) is accessed.

This may appear more confusing than the first program, but one good programming tip is to always try to keep to one "execution path", rather than jumping to various routines – this will usually speed up the final execution time.

The correct address

The program above is of very little use, though, so let's try a better example – calculating the screen address of the top left hand corner of a cursor position.

We'll refer to the cursor's horizontal position as Xpos and the vertical position as Ypos.

The screen address can be calculated using the following three equations, depending on which mode you're in. (Remember that in mode 0, characters are four bytes wide, in mode 1 they're two bytes wide and they're one byte wide in mode 2.)

All three equations require both Xpos and Ypos to be decreased before they're used.

```
        MODE 0 : &C000 + ( &50 * Ypos ) + ( 4 * Xpos )
        MODE 1 : &C000 + ( &50 * Ypos ) + ( 2 * Xpos )
        MODE 2 : &C000 + ( &50 * Ypos ) + ( 1 * Xpos )

        CALL &BB78
        DEC  H          ;Decrease Xpos
        DEC  L          ;Decrease Ypos
;Now I'm going to make BC hold the cursor position, as
;I'll need to use HL to calculate the screen address
        LD   B,H
        LD   C,L
        LD   HL,&C000
        LD   DE,&50
        OR   A            ;If Ypos=0, then skip the
        JR   Z,skip       ;routine to add ( Ypos * &50 )
loop1:  ADD  HL,DE
        DEC  C
        JR   NZ,loop1
;Now we need to work out the number to multiply Xpos by
;(1, 2 or 4 depending on the screen mode)
skip:   CALL &BC11
        LD   IX,table
        LD   E,A
        LD   D,&0         ;DE = screen mode
        ADD  IX,DE
        LD   E,(IX+0)     ;DE = 1,2 or 4
        LD   A,B
        OR   B            ;If Xpos=0 then skip the
        JR   Z,skip2      ;routine to add ( Xpos * DE )
loop2:  ADD  HL,DE
        DJNZ loop2
skip2:  RET
table:  DB   4,2,1
```

Sprite Handling

So far we've only looked at using (screen

ASSEMBLY TIME

If anyone out there finds that, after typing in the programs above, they get the message "Syntax error", then you're typing the programs into the wrong environment. To run these programs, you need an assembler. These handy utilities will turn the programs into executable machine code, which the CPU can understand.

Choosing an assembler can be a little daunting. Look out for assembler reviews in *AA* or in the *AA Buyer's Guide*. If you want a good all-round Assembler & Monitor package, don't expect to get much change out of twenty quid, and if you're stuck with using a 464 without a disk drive, don't spend too much on one, as you'll soon get sick of waiting ages for it to reload after each "crash".

Personally, I use the now-extinct *Laser Genius* package, but if you own a ROM board, it may be an idea to go for a ROM-based package, as assemblers and monitors can, and often do, take up a lot of your precious memory.

After all, why buy a monitor to show the contents of your memory, when over 10K of it has been written over by the monitor!



● Maxam II: An excellent assembler from Arnor.

mode) as the displacement to add to the address of "table". Modifying the program is simple. We'll leave you with the program below, which is designed for easier sprite handling.

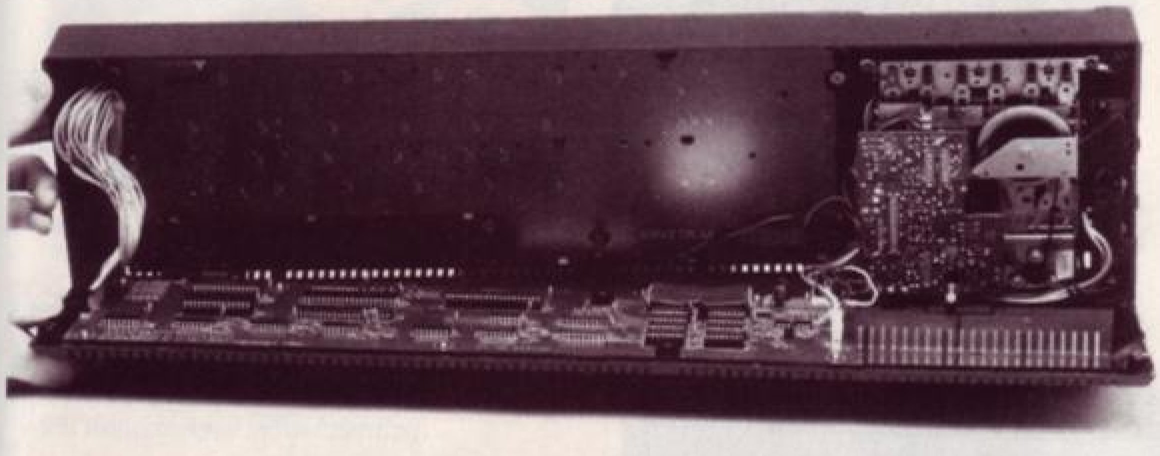
Rather than having to constantly load up registers with a sprite's location, length and width, this program lets you refer to a sprite using just one byte and a table of sprite addresses, lengths and widths. Each sprite needs four bytes of data, so a displacement of four is added a certain number of times to the start of the table, depending on the sprite number.

This ends up accessing the address:

```
table + ( sprite_number * 4 )
Entry:  A holds sprite number ( 0 to 255 )
Exit:   DE holds sprite address
        B  holds sprite width
        C  holds sprite height
        LD   HL,table
        LD   DE,4        ;This is the displacement
        OR   A
        JR   Z,skip      ;No displacements to be added
loop1:  ADD  HL,DE       ;
        DEC  A           ;Add (sprite number * 4) to HL
        JR   NZ,loop1    ;
skip:   LD   E,(HL)
        INC  HL
        LD   D,(HL)
        INC  HL
        LD   B,(HL)
        INC  HL
        LD   C,(HL)
        RET

table:  DEFW sprite0 address
        DB   sprite0 width
        DB   sprite0 height
        DEFW sprite1 address
        DB   sprite1 width
        DB   sprite1 height
```

● Next month: The one thing that you can't turn to the firmware for – sprite routines. How do you get fast, pixel accurate sprites?



● Fancy writing code directly to your Z80? Machine code fans need look no further than Cracking the Code.

DO IT YOURSELF!

Now, there must be a whole load of programmers out there crying out "I knew that... I could've said that!". So put your money (your pen, actually) where your mouth is and write in! Pass on your latest tip, tell everyone about the unique way you've learned to use the CPL instruction, or whatever else it is you want to tell the world!

Whoever provides the best tip each month will receive a crisp twenty five pound note (*will they indeed – ed*).

The address to write to is BC1D... no, seriously folks (*you're fired – ed*), send your tips etc to Cracking the Code, Amstrad Action, 4 Queen Street, Bath BA1 1EJ.

Naked video

Just how do professional coders get the CPC performing those incredible graphic acrobatics? In the first part of a series devoted to special video effects, CONRAD BESSANT spills a few beans...

Almost all popular CPC arcade games have eyecatching special effects, with four-directional scrolling, screen wobbling and multi-mode screens being the most common.

Because these effects are so spectacular, many people automatically assume that they are difficult to perform, and even intreped programmers who do try to explore them have difficulties in obtaining adequate information.

In this series of articles I shall be bringing together all the relevant information, and explaining how to use it to produce a variety of effects.

Addressing yourself

The key to these effects is what is known as direct hardware addressing.

The CPC, like many other popular home computers (the BBC micro, Commodore Amiga etc), contains several different pieces of hardware dedicated to creating screen images, thus leaving the CPU free to do other things.

In normal operation we can forget about this hardware, as the operating system will take care of it for us, but to create fast and unusual effects we must send data directly it, as the software routines are just too slow and inflexible.

As speed is important in these effects you may think that machine code has to be used, but fortunately this is often not the case. For example, to scroll the whole screen to the left in software would mean moving 16384 bytes of memory, which would obviously be faster to do in machine code (although still not fast enough) than in BASIC. However, by addressing the hardware directly we would only need to write 4 bytes of data to the hardware, which can be done nearly as quickly in BASIC as machine code because there is so little to do.

Most direct hardware addressing effects can only be done on the entire screen, because the chips used are the ones which control the way the whole screen is displayed.



The main items of hardware used in creating the screen display are explained in brief below. Figure 1 shows how they interact.

The Monitor

Basically, this is a cathode ray tube (CRT) and associated hardware mounted in a plastic case. Inside the CRT a thin beam of electrons scans the entire screen very quickly (in 1/50th of a second), building up an image based on the information sent by the computer. To see this in action, turn it on!

Cathode Ray Tube Controller (CRTC)

This is a 40-pin silicon chip which, as its name suggests, controls the mode of operation of the CRT. The CRTC works very closely with the video gate array (see later for details), and together it is their job to convert the contents of the screen memory into the video signals which the monitor requires to build up the picture. However, we can alter the way in which this conversion takes place, by programming the CRTC with our own values. For example enter the following:

```
OUT &BC00,8 : OUT &BD00,1
```

Quite interesting, but not very useful! We will discover why this causes the display to shimmer next month, but in the meantime type the following to return the display to normal,

```
OUT &BC00,8 : OUT &BD00,0
```

Not surprisingly, slightly longer programs are required to perform worthwhile effects. In fact the CRTC is the video effects program-

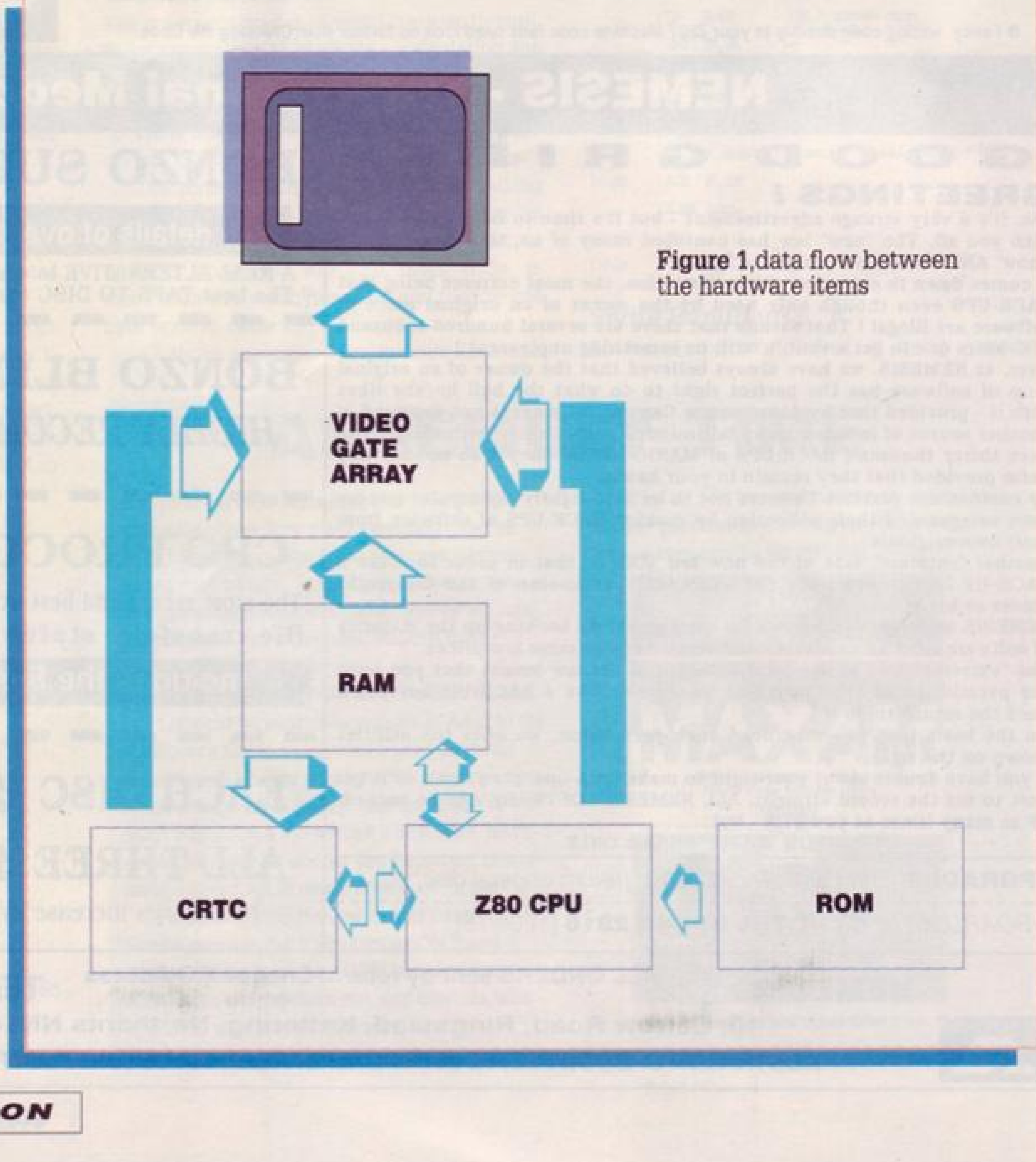


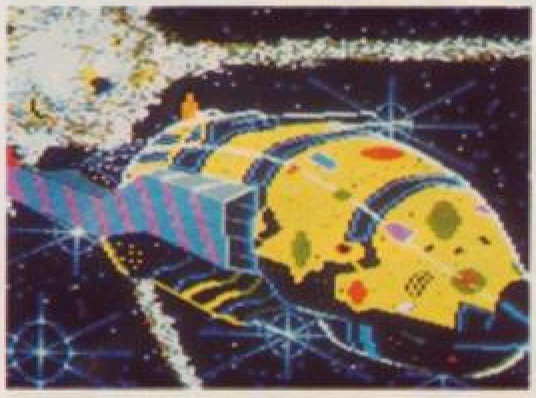
Figure 1, data flow between the hardware items

mer's most useful tool, and we use it for scrolling, wobbling, scramling, and other specific effects.

The actual name of the chip is the 684 CRTC, and the same chip is used, or emulated, in the BBC micro, IBM PC and PC clones.

The Video Gate Array

This was produced specifically for the Amstrad CPC by Ferranti, and performs several important actions – of which the most interesting to us are changing the screen mode and loading information into the colour pallete (the BASIC 'INK' command employs this chip). Direct addressing of this chip is not as simple as addressing the CRTC, but several firmware routines are available which help us address it. For example, type in the following:



● ...give it a quick poke, and you can make it shimmer like this!

```
CALL &BD1C
```

What we have done is called a firmware routine which tells the video gate array to select mode 0, but we have not cleared the screen or informed the routines which put text on the screen that the mode has been changed, so text is still being written as if in mode 1 – hence the text is illegible.

Again, this is quite useless on its own, but it forms the basis of programs which use several different modes on the screen at once. To return the screen to normal just change modes using the MODE command.

The Screen Memory

This is a section of the random access memory consisting of 16 kilobytes, in which the screen display is stored. All actions such as drawing lines and writing text address this memory, which the CRTC and the video gate array then use to create signals for the monitor. This is the only piece of hardware which does not alter the entire display when addressed.

This area of memory is usually between &C000 and &FFFF in RAM, but we can tell the CRTC to use a different area of memory. For example:

```
OUT &BC00,12:OUT &BD00,43
```

This causes some of the computer's workspace to be displayed on the screen. The pixels on the screen which keep changing are memory locations whose contents are constantly being updated – things like system counters and the stack. Again, just change modes with the MODE command to return the display to normal.

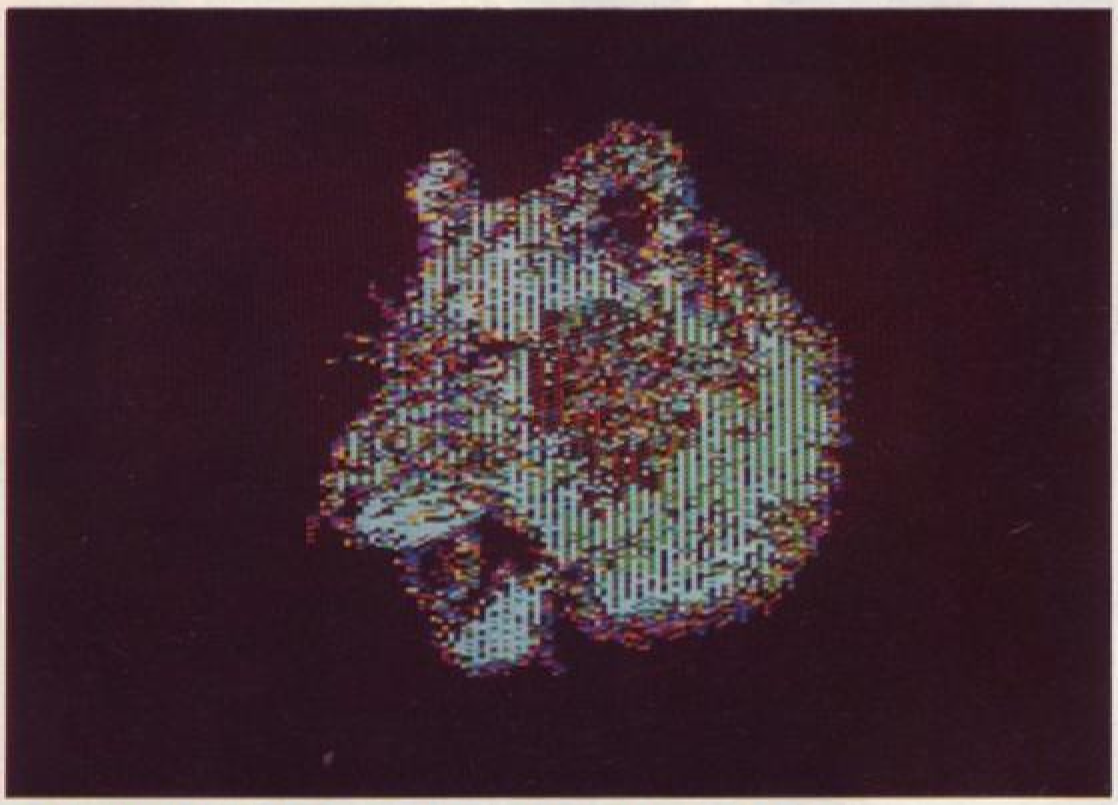


● Take a normal mode 0 picture...

Both sprite animation and vector graphics programs address the screen memory directly for speed. These articles will deal with neither of these, as sprites have already been explained very well elsewhere and vector graphics could well warrant a series of articles of their own.

The Screen Firmware

Firmware is the name given to machine code routines which are permenently stored in the CPC's ROM. We access these routines by CALLing an area of RAM called a 'jumpblock', this jumpblock then calls the appropriate routine from ROM.



● and this is what you get if you transfer it into mode 0 without redrawing the screen.

There are several sets of routines, called 'packs' which control the screen. These are the Text VDU, the Graphics VDU, the Screen Pack and the Machine Pack. Usually the firmware routines are too slow for video effects, or are not tailored exactly to our needs and we have to resort to direct hardware addressing. However, we will occasionally use the Machine Pack, as it contains routines to make hardware addressing easier (this is what we used in the video gate array example above, and is how we managed to bypass the Screen Pack). The following program is an example of how we call the Machine Pack in order to change the colour pallete using the video gate array.

```
1 CALL &BD22:CALL &BD25:GOTO 1
```

RUNning this makes 'bands' appear to move smoothly up the screen. This is because the program is changing the colour palette out of synchronisation with the monitor. The BASIC 'INK' command is automatically synchronised with the monitor, and is a prime example of the lack of versatility of the software.

Generally, in BASIC video effects programs, if you see a CALL statement firmware is being used, whereas if you see a POKE or OUT statement, direct hardware addressing is taking place.



● This picture was created in mode 2...

That concludes a general overview of the CPC's video hardware. It might seem a little academic at the moment, but an awareness of the basic principles is required before moving on to the details of how to produce more useful and complex special effects.

● Next month we will be looking in detail at the most interesting video chip, the CRTC, and using it to produce some spectacular effects.

THE GALLERY



● Don't look if you can't stomach it. The Alien pops out courtesy of Martain McCanney, Co. Dublin, Ireland.



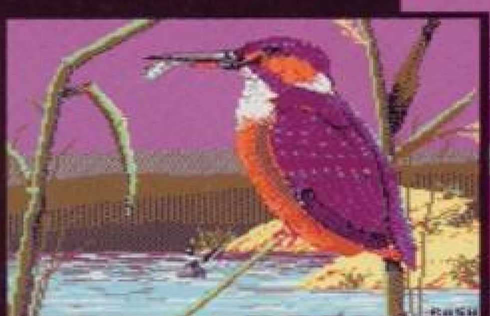
● A rip-roaring tiger from down under (I didn't know they had them in New Zealand!). From Dave McWha of Hamilton.



● A shining example of R. Patel's handiwork. It's Jack Nicholson, and he's not joking!



● This magical Irish fairy-tale fellow comes from Dave McWha of NewZealand, who uses *Advanced Art Studio* for all his work.



● This colourful kingfisher comes from R. Patel of Birstall. *Advanced Art Studio* was used to create the image.



Here comes another R. Patel masterpiece, but where did he see our publisher driving like this?

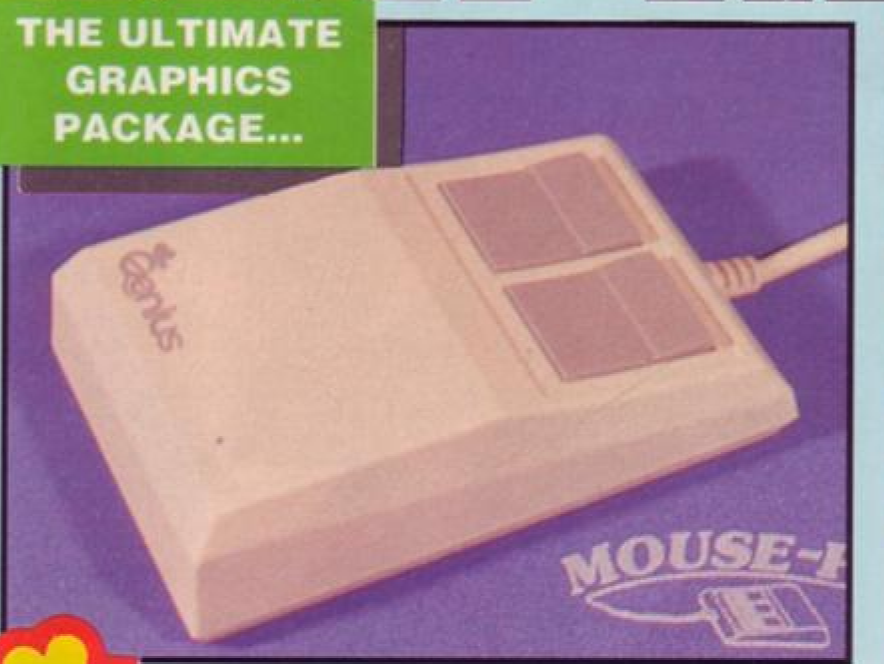
● All you great CPC artists out there stand to win yourselves £20 *and* the eternal glory of having your pictures printed in *AA*.

So send those piccies in to the address on the right, together with some brief notes on the paint package and any special techniques you used – and don't forget enclose an SAE if you want your disk back.

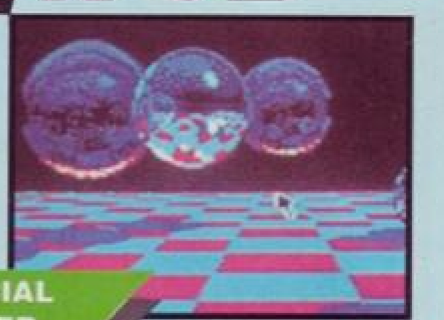
Adam Waring,
AA Gallery
Future Publishing
4 Queen St
Bath BA1 1EJ

DATEL ELECTRONICS

THE ULTIMATE GRAPHICS PACKAGE...







SPECIAL OFFER PACK!





Genius Mouse

COMPLETE WITH

OCP

ADVANCED ART STUDIO™

- Genius Mouse is a high resolution two button mouse featuring optical counting, teflon guides, microswitches, rubber coated ball and high quality interface.

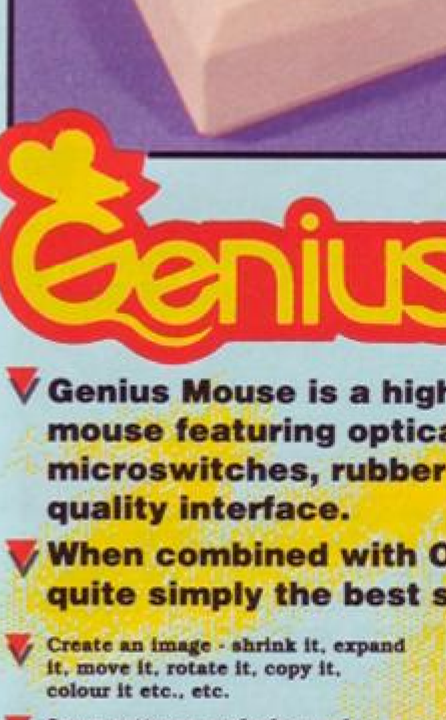
TAPE OR DISK FOR 464 OR 6128 (PLEASE STATE WHICH REQUIRED) N.B. 464 NEEDS DK' 64K RAM PACK

- When combined with OCP Advanced Art Studio this graphics package is quite simply the best system available. The features are unmatched...

- Create an image - shrink it, expand it, move it, rotate it, copy it, colour it etc., etc.
- Spray patterns or shades, make elastic lines - stretch and manipulate shapes.
- Zoom in to add detail in fine mode.
- Pulldown/Icon driven menus for ease of use.
- Mouse operation, plus joystick and keyboard control.
- 16 pens, 8 sprays, 16 brushes - so flexible anyone can create superb graphics easily.
- Full cut and paste facilities plus excellent printer support.
- Pixel edit, font editor, flip, invert, rotate, solid or textured fill and professional manual make Advanced Art Studio simply the best graphics package.

ONLY **£49.99**

TOTAL PACKAGE INCLUDES MOUSE, INTERFACE, ADVANCED ART STUDIO, MOUSE MAT AND HOLDER



COMPLETE WITH MOUSE INTERFACE

- The Genius Mouse Graphics System comes complete with the special Mouse Interface to allow super smooth control.
- Attractively styled to match your 464 or 6128 design and colour.
- Simply plugs into Expansion/ Joystick Port.



FREE!

MOUSE MAT AND MOUSE HOLDER

(WORTH £12.99)

WITH EACH PACKAGE

ONLY WHILE STOCKS LAST

A TOTAL GRAPHICS PACKAGE

SAVE OVER £25

- NO OTHER GRAPHICS PACKAGE CAN OFFER SO MUCH AT SUCH A PRICE!!
- OCP ADVANCED ART STUDIO ALONE NORMALLY RETAILS FOR £25.00. THE MOUSE SYSTEM HAS A NORMAL PRICE OF £39.99. NOW YOU CAN BUY BOTH FOR ONLY £49.99 AND GET A MOUSE MAT AND HOLDER (worth £12.99) ABSOLUTELY FREE.
- WE HAVE LIMITED NUMBERS OF THESE PACKS - SO BUY NOW!

WHAT THE MAGAZINES HAD TO SAY...

AMTIX "CLASSIC"

C.T.W. "PICK OF THE WEEK"

AMSTRAD COMPUTER USER "BEST UTILITY OF THE YEAR"

ALL ORDERS NORMALLY DESPATCHED WITHIN 48 HRS

HOW TO ORDER ...

BY PHONE	BY POST	FAX
0782 744707 24hr Credit Card Line	Send cheques/POs made payable to "Datel Electronics"	0782 744292 UK ORDERS POST FREE EUROPE ADD £1 OVERSEAS ADD £3

PRICES AND SPECIFICATIONS CORRECT AT TIME OF PRESS AND SUBJECT TO CHANGE WITHOUT NOTICE

CALLERS WELCOME - Please reserve goods by telephone prior to visit.

DATEL ELECTRONICS

DATEL ELECTRONICS LTD., FENTON INDUSTRIAL ESTATE GOVAN ROAD, FENTON, STOKE-ON-TRENT, ENGLAND.

SALES ONLY	TECHNICAL ONLY
0782 744707	0782 744324

DATEL ELECTRONICS

dk'tronics

MORE MEMORY POWER

dk'tronics



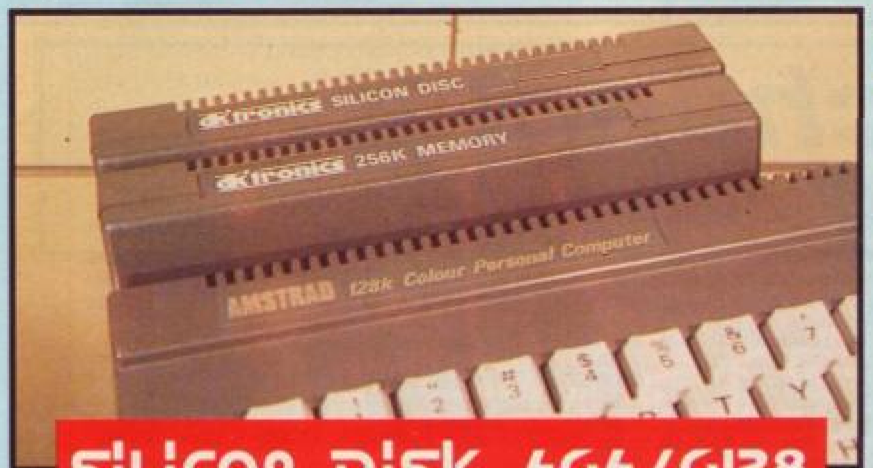


64K AND 256K MEMORY EXPANSION

- Simple plug in memory expansion gives instant extra memory.
- Features bank switching software for easy use by the programmer or for use as a data storage area.
- The software also features some extra BASIC commands.
- 64K unit expands 464 to 128K. The 256K unit takes your 6128 to a massive 320K!!
- 64K unit brings 464 up to CPC 6128 memory configuration making a much larger software base available. Will work straight off with many programs designed for this unit (including OCP Art Studio - see Ad.).
- Ideal for use with the CPM 2.2 etc.
- All bank switching done automatically by supplied software (cassette 464 - disk 6128).

ONLY £49.99
64K FOR 464
ONLY £99.99
256K FOR 464 OR 6128 (PLEASE STATE)

THE TOTAL SOLUTION TO YOUR MEMORY EXPANSION NEEDS!!

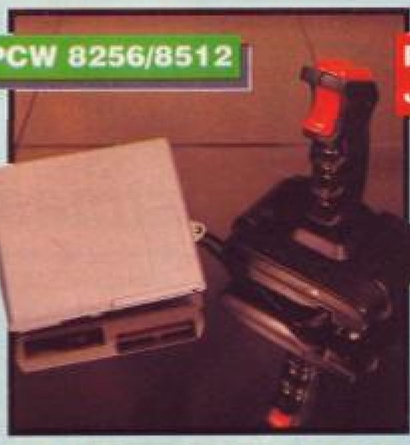


SILICON DISK 464/6128

- This is the fastest storage system available for the Amstrad CPC computers and is compatible with CPM 2.2, CPM+ and all DK'Tronics peripherals.
- The 2516K Silicon Disk is designed to be used in conjunction with at least one normal Disk Drive attached to the system.
- When the 2516K Silicon Disk is fitted only 2K is used for the Silicon Disk directory, leaving 254K for storage - that's 70K more than a normal Disk Drive.
- Programs can be exchanged between Silicon Disk and normal Disk for increased speed.
- Software is on ROM (nothing to load) and can be used in two modes - Basic under AMDOS with normal LOAD, SAVE CAT MERGE commands etc. and within CPM 2.2 CPM+ where commercial programs are designed to run on multi-drive systems.

ONLY £129.99
464 or 6128 (Please state which)

PCW 8256/8512

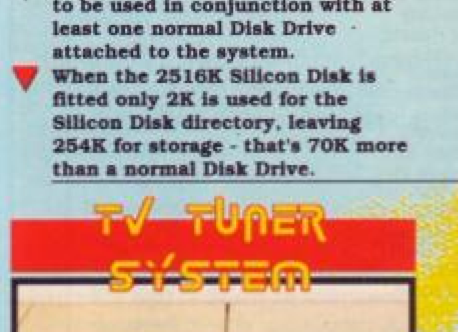


PCW 8256/8512 JOYSTICK + INTERFACE

- Now you can have true Joystick control for games on your PCW.
- Connects to PCW Expansion Port.
- Quickshot II has trigger and top Fire Buttons pluis Suction Cap Base.
- Superb control for large range of games (Tomohawk etc.).

Only £19.99

TV TUNER SYSTEM



- Turn your Amstrad Monitor into a full feature TV set with our TV Tuner System.
- Latest chip technology gives crystal clear reception on all channels.
- Built-in speaker.
- On/Off volume controls.
- Brightness and colour controls.
- Channel selector.
- Attractively styled to match your computer.
- Why not realise the full potential of your monitor?

ONLY £69.99

ALL ORDERS NORMALLY DESPATCHED WITHIN 48 HRS

HOW TO ORDER ...

BY PHONE	BY POST	FAX
0782 744707 24hr Credit Card Line	Send cheques/POs made payable to "Datel Electronics"	0782 744292 UK ORDERS POST FREE EUROPE ADD £1 OVERSEAS ADD £3

PRICES AND SPECIFICATIONS CORRECT AT TIME OF PRESS AND SUBJECT TO CHANGE WITHOUT NOTICE

CALLERS WELCOME - Please reserve goods by telephone prior to visit.

DATEL ELECTRONICS

DATEL ELECTRONICS LTD., FENTON INDUSTRIAL ESTATE GOVAN ROAD, FENTON, STOKE-ON-TRENT, ENGLAND.

SALES ONLY	TECHNICAL ONLY
0782 744707	0782 744324

HELPLINE

Feeling helpful? Just send your name, address, phone number (say if you don't want it printed) and subjects on which you're offering help to: *Helpline*, Amstrad Action, 4 Queen Street, Bath, BA1 1EJ. Please write on a postcard or the back of a stuck down envelope and keep it short or you won't get in (or you'll get cut to 'loadsagames').

If you want help contact the appropriate Helpliner – not us. By post include a self-addressed, stamped envelope for the reply – or you won't get one. And phone only in decent hours!

Piracy is not welcome: don't try it, you'll get booted off. Keep it legal. And if you receive SAE's, for heaven's sake return them with some acknowledgement. If you want to come off *Helpline* just write and say so.

I wish to contact any Amstrad owner who is a postal chess player and plays in PPC tournaments etc...
A H Mahon, 34 Gorsedale Park, Wallasey, Wirral, L44 9HB. ☎ 051 630 4337

Calling all 464 owners. I need all your unpublished PD programs ASAP for the December copy of "Pete's PD". In return you will receive fame greater than Elvis. Please send your cassettes to me. All programs I decide to use will receive a copy of the cassette, when finished and also will get asked to write more PD for the March edition.
Peter Charles, 41 Rocky Park, Rock Ferry, Birkenhead, L42 1PL

Desperately seeking a copy of *Hitch-Hiker's Guide to the Galaxy*. Sensible offers paid. also help on *Great Escape* wanted.
Neil Mckeown, 6 Glenview Park, Bangor, Co Down. ☎ 0247 466192

Penpal wanted to swap letters on disk. Send either a *Word Perfect* file or just REM statements in BASIC. I am football mad but I am desperate for any sort of correspondence.
Michael Aidulis, 45 Braidholm Road, Giffnock, Glasgow, G46 6EN.

Wanted! Desperately! Copy of *Rampage* on cassette any condition, good price will be given.
Andy Outram, 2 Claygate close, Elm Park, Hornchurch, Essex, RM12 4LU.

Stop Press help. Ex-Acorn Electron user, any fellow refugees, plus any one else who wants a pen pal.
James Reid, 13 Milverton Avenue, Bearsden, Glasgow, G61 4BE.

I am editor of a local school magazine. Required: anyone willing to write anything they like eg. film/album reviews, soap operas... anything. Also any help in arranging interviews with celebrities would be greatly appreciated. Any help from America, Australia etc. welcome. Penpals wanted.
Andrew Wong, 10 Gerllan, Tywyn, Gwynedd, LL36 9DE. ☎ 0654 711629

Wanted, Multiface 2. Will swap *Super Hang-on, On The Run, Super Nudge 2000* and *Express Raider* on tape.
Ellis Vincent, 24 Highwood Ave, Bilbourgh, Nottingham, N98 3AF.

FREE software – Penpal wanted for 18 year old 6128 owner. Send disk and I will return it full of free PD software.
Stephen Robinson, 1 Sycamore Ave, Golborne, Warrington, Cheshire. WA3 3SF.

Penpals wanted especially those with experience of the LC-10 printer (non-colour). Especially user-defined characters and screen dumps. I have a 6128 and am 15.
Adrian Forbes, 37 Victoria Rd, Gourock, Scotland, PA19 1DF.

Help wanted on *Treasure Island Dizzy*, cheats or how to get hold of the bag of gold?
Mark Fletcher, 18 Reynolds Way, Abingdon, Oxon, OX14 5JT.

Anyone got a copy of *Amstrad Action* 26 and 28? Cover price paid.
Mark Rogowski, 33 Whiphill lane, Amthorpe, Doncaster, DN3 3JP. ☎ 833122.

Help needed with Digital Electronic Audio filter in *Academy* stage 2.
Harry Banks, 19 Wiiloughby Rd, North Shields, Tyne and Wear, NE29 7Nb

Need help on *Combat School* and *Death Stalker* and others, please somebody write!
Mark Warman, 37 Riben Ave, Somercotes, Derby, DE55 4LL.

Need help! On *Predator, Target Renegade, Gryzor, Dragon Ninja, Barbarian 2* and *Roadblasters*. Will pay for cheats and pokes, send SAE with pokes.
Phil Lloyd, 18 Ringway, Ellesmere Port, South Wirral, L66 3LE.

Mature person (retired), fair knowledge BASIC/*Protext* on 464, now trying to master BASIC and CP/M Plus on new 6128. Would like to correspond with any person on these subjects. Would welcome chance to purchase cheap second hand *Protext* and similar serious applications on disk.
Mick Baker, 68 Northfields, Clowne, Chesterfield, S43 4BA.

Has anyone got *AA28* they're willing to sell? Please (I'm desperate), your sensible offer paid.
Michael Hourinhan, 29 Minyr Awel, Pontneddfechan, Neath, West Glamorgan, SA11 5ND.

I will write your database for you... any type.
K Grimsditch Jnr, 12 Reddish Vale Rd, Stockport, SK5 7HE.

Penpals wanted for 6128 owner, I'm 14. Any sex or country, ALL letters answered!
Pia Janering, 7 Harford Walk, East Finchley, London, N2 0JB.

Help: Need *AA*4 and 22 in a rush. Any *sensible* price paid!
Daniel Maharry, 10 Boleyn Ave, Westbrook, Margate, Kent, CT9 5HL.

Anyone got *Stockmarket* disk or tape? Your sensible price paid.
A Davis, The Old Vicarage, Meerbrook, Leek, Staffs, ST13 8SJ.

Infinite lives pokes wanted for *Arkanoid* and *Aliens* and infinite time on *Stormlord much appreciated.*
Robert May, 13 Bragenham St, Gorton, Manchester, M18 7AN. ☎ 061 230 6755 – after 7pm.

464 owner wants female penpal, 12-14. Photo and telephone number required.
Liam James, 40 Marion Rd, Smethwick, Warley, West Midlands, B67 7LL. ☎ 565 3958.

Help wanted on *Captain Blood*. Anyone have *Salamander* for sale, tape/disk or *Speedtrans +3*.
David Owens 16 Borrowdale Walk, Lake View Est, Northampton, NN3 1PW

Help wanted. Has anyone out there in help and got a 464 or 6128 *Firmware Manual*? If you have I've three tasty videos to offer: *Conan the Destroyer, The Jerk*(Steve Martin) and *The Entity*. All originals with covers – VHS.
Michael Hayes, 70 Lonsdale St, Nelson, Lancs, BB9 9HG.

Has anyone got *Lurking Horror* (Infocom disk), *Hitch-hiker's Guide to the Galaxy* or *Lucasfilm Prestige Collection* on disk to sell?
Stephen Jackson, 55 Bayswater Place, Leeds, LS8 5LS. ☎ 0532 487409.

Help with: Multiface 2, FD1, DMP2000, DK'tronics Speech ROM, *Tasword, Advanced Art Studio, Cherry Paint, Discovery Animator*, BASIC programming, customising computers, making joysticks, tape loading problems and most games. Also listings/screens printed 2p a page.
David Carter, Ruxley House, 28 Mount Hermon Rd, Woking, Surrey, GU22 7UH. ☎0483 763223.

Games for sale. Many unavailable titles, send SAE for list. Offer open to 664/6128 users until January 1st.
JE Hayes, Robinmead, 1 Heronway, Hutton, Mount, Essex, CM13 2LX

Offering help with *GAC* (anything) or BASIC (anything). Have pokes from complete set of *AA* and *ACU* for games. Loadsa games, some MC also.
John Whelan, 17 Sycamore Rd, Rathanapish, Earlton, Ireland.

Free help on: *Barabrian 2, Last Ninja 2, Gryzor, Freddy Hardest, Operation Wolf, Target Renegade* and *Renegade*. Cheats for *Exolon, Cybernoid II, Impossaball, Super Stunt Man* and *Arkanoid 2*.
Peter Cox, 56 Dynes Rd, Kemsing, Kent, TN15 6RB.

Help! I need *Model Universe* on disk and *Soft 986 Firmware Manual*, will pay any reasonable price.
Andrew Manning, 29 Kingswood Rd, , Eccles, Manchester, M30 8HN. ☎061 789 2294. 10am to 10pm Sun – Mon, 6pm to 10pm Sat.

Help given with computing problems (not electronics).
Andrew Price, 48 Lockington Crescent, Dunstable, Beds. ☎0582 609533.

discover why!



SHINOBI

You're masashi, a tough ninja warrior on a mission to clear the town from rebel martial arts fanatics. Explore the scrolling urban landscape and beat the hell out of your opponents, but watch out for the end-of-level guardians.



SILKWORM

It's not true! Even after months of negotiation with the Ruskies and despite a mass exodus out of Afghanistan, we're still under threat. There's no one left to press the Nuke button so the battle has switched to copters and plane. Non-stop shoot-'em-up arcade action.



CONTINENTAL CIRCUS

Compete in formula one races in Brazil, America, France, Monaco, Germany, Spain and Japan, Race hard, but watch out for other cars. Colliding can be fatal. And do visit the pits for fuel and repairs.



GEMINI WING

The aliens have had enough. They're not going to take their brethren being blasted on computer screen any more. So they've come down in their hordes to blast the pitiful race of carbon-based life forms called humans. Can you stop them? Somebody has to do it.



NINJA WARRIORS

Can you survive brutal enemy onslaught? Fight with hand, foot and dagger to rid the street of the scum that dare infest your home town. A classic arcade conversion.



DOUBLE DRAGON II

Ferocious two-player simultaneous martial arts mayhem. Evil fiends have captured your girlfriend - it's up to you and your brother to rescue her. Don't fail. Through the town, countryside, mountains and finally into the lair. Use whatever weapons you can find to stay alive.

ALL AVAILABLE ON

AMIGA	**£19.99**
ATARI ST	**£19.99**
C64 DISK	**£14.99**
C64 CASS	**£9.99**
SPECTRUM CASS	**£9.99**
SPECTRUM +3 DISK	**£14.99**
AMSTRAD CASS	**£9.99**
AMSTRAD DISK	**£14.99**

Virgin Games

VIRGIN GAMES
2-4 VERNON YARD
119 PORTOBELLO ROAD
LONDON W11 2DX

Stand up for Tasword!

Last month TOM OSMOND looked at customising *Tasword* to suit your needs. This month's second and final instalment tackles the nitty-gritty – editing that text.

In part two of our *Tasword* reappraisal we are going to look at what the program *can do*, rather than pick out its faults.

Now if you followed last month's issue, you should by now have at least one disk customised to your own requirements – the rest is plain sailing!

You can forget about those glorified courses in word processing (I had to take one as part of my degree studies) because armed with your CPC, an instruction manual and a few ideas, you can learn as you go along. *Tasword* is ideal for this. Its operating simplicity alone should be listed as a function!

It's always easier to work with text in memory, so if you haven't yet written that first chapter of your novel or letter of praise to *AA*, load your customised copy of *Tasword* and type out a few paragraphs to experiment on.

That done, return to the main menu (CTRL + Return) and press "S" to SAVE this text file. A name of up to eight characters can be used, such as CHAPTER or CHAPTER.001. Should you have a file on disk with the same name, the old file is given the suffix .BAK as a backup. All files are held alphabetically in the disk directory and remember that a full CATalogue is given before the SAVE prompt.

The Merge text option on the menu is particularly useful for linking text files before printing. Press "M", follow the on-screen prompts to merge the file you have saved and it will follow on from your original document in memory. However, should you need a merged file to begin on the next page, use the on-screen page marker (CTRL+P), type a single character at the bottom of the last page and then your merged text file will enter memory as the first line of the next page. All you have to do then is erase the unnecessary character.

Editing highlights

So *Tasword* can clearly create text files and successfully store the information, but how does it function as a text editor? This has to be where any word processor stands or fails – and *Tasword* stands with the best of them.

New characters or lines can be inserted (CTRL+I and CTRL+O) at the cursor position, single words may be deleted (SHIFT+DEL) as can entire lines of text (CTRL+DEL). Unfortunately, these last two commands are sited too close together and many is the time I've deleted a line rather than a word! *Tasword* comes to the rescue, though: press CTRL+@ and the previously deleted line is restored at the cursor position and human error is rectified.

Tasword's ability to reformat an entire document to new margin settings is a neat feature, particularly when the printed text does not conform to your original ideas. To operate this, first clear all margin settings (CTRL+S), set the new left margin (CTRL+A) with the cursor set on the desired column, then the right margin (CTRL+D). Before you reformat (here using CTRL+U) to force the text to conform to the new margin settings you *must* insert a blank line (CTRL+I) between every paragraph. This is time-consuming, but failure to do so will result in the entire document being reformatted as one single paragraph! The blank lines can be removed later (CTRL+DEL).

Tasword's block commands – the cut and paste facility – is straightforward enough, but again takes time. Sections of text can be moved within the document erased. The beginning and end of the section must be marked (CTRL+B and CTRL+V respectively). A press of CTRL+M will move this marked section to the new cursor position, or else CTRL+C will

COMMAND PERFORMANCE

The following are *Tasword*'s most commonly-used command keystrokes:

CTRL+2	HELP page off
CTRL+6	put header into memory
CTRL+7	put footer into memory
CTRL+A	set left hand margin
CTRL+B	mark beginning of block of text
CTLR+C	delete marked block of text
CTRL+D	set right hand margin
CTRL+I	insert character or line, on/off
CTRL+J	rejustify paragraph
CTRL+K	rejustify line of text
CTRL+L	unjustify line of text
CTRL+M	move marked block of text to cursor position
CTRL+O	insert text, on/off
CTRL+P	dotted line marking page break on-screen, on/off
CTRL+S	clear all margin settings
CTRL+V	mark end of block of text
CTRL+W	centre a line of text
CTRL+Z	clear all TAB stops
CTRL+@	restore the last deleted line of text
CTRL+DEL	delete a line of text
CTRL+TAB	clear TAB stop at cursor position
CTRL+SPACE	to insert printer control character
CTRL+ENTER	return to main Menu options
SHIFT+DEL	delete a single word at the cursor position
SHIFT+TAB	set a TAB stop at the cursor position
CTRL+ [	go to top of file
CTRL+]	go to bottom of file
CTRL+<	scroll up one line
CTRL+>	scroll down one line
SHIFT+ [	scroll up one page
SHIFT+]	scroll down one page

delete it. However, *Tasword* is limited to moving a maximum of 16,000 characters at any one time.

If you have a printer attached, select the "P" option from the main menu and *Tasword* presents an incredibly simple printing menu requiring the minimum of fuss to operate. However, if you fail to respond with a "Y" at the "Form feed at page breaks" option, then the perforations on continuous paper will not be skipped!

Headers or footers can be added to each page of printed text. Typically, these might consist of your name and the title of the story, or whatever else you require. Entering such single lines of text into memory is enabled by the use of CTRL+6 to set the top line of text as a header, or CTRL+7 to set the top line as a footer.

Prints charming

To print, select the appropriate option on the printing menu – and this is the reason we had to spend so much time last month customising



● *Tasword* reformats (referred to confusingly in the program as *re-justifying*) text a paragraph at a time. The new ruler line can be seen at the bottom of the screen.

the number of lines per page to our own needs! So, to print a text file you need only respond to each question on the menu in turn (or else press COPY to select the default mode shown) and watch in amazement as a new masterpiece takes shape on paper.

Tasword has its own in-built facility for providing printing options such as emphasised, condensed, double strike, elite, italics and underline. Users of Epson printers will not have to adjust any of these codes, but each can be configured to suit your own printer if need be – and this can be done at the program customising stage, when the printer control codes may be redefined and then saved.

But how do you tell the printer to change styles? Simple. Return to the main document in memory, and prepare to add a few strange characters to the text...

Titles can be underlined, for example, by placing the cursor at the square before the first letter, pressing CTRL+SPACE and then typing a capital "J". This letter will appear on the screen in inverse video (black on green rather than green on black if you have adopted the colour scheme recommended last month). Move the cursor to the square after the last letter of your title and repeat the process, this time typing a small "j" – capital letters turn a printing function on, small letters turn it off.

This same process can be applied to other



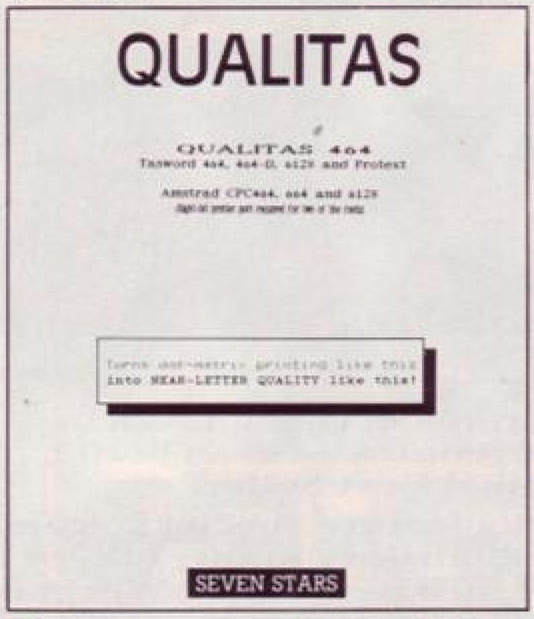
● The Save option gives you a full disk directory before you have to type in your filename.

printer control codes, but one drawback with *Tasword* if you have a justified right margin is that the program does not compensate for these codes and will replace them with blank spaces at the end of a line. To overcome this, unjustify the line where the control codes appear (CTRL+L), move the cursor outside the right margin and type in the last two letters of the last word (or one letter if only one code appears in the line). Erase these letters from the word and then rejustify the line (CTRL+K). Although your last word will over-write the margin on-screen, it will be printed normally on paper.

Unless you have been fortunate enough to acquire a printer of quality, then sooner or later you are going to need *Qualitas* and an 8-bit printer port. Installation of the loaders for both programs into *Tasword* is achieved easily and not only do you need just the one work disk to RUN them all, the end results are stunning. Besides, using *Qualitas* means you never have to make allowances for embedded printer control codes since this printing utility automatically compensates for them.

All this and more

Apart from the customising process, which needs be done once only (unless like me, you need various formats to work within), the program handles text efficiently and quickly, requiring no thought in use at all – giving you, the writer, more time to concentrate on the creative business in hand. As a stand-alone program it provides all the functions, and probably



● *Qualitas* is an excellent printing utility which can be used in conjunction with *Tasword* to give near-letter-quality (NLQ) type and a range of fonts.

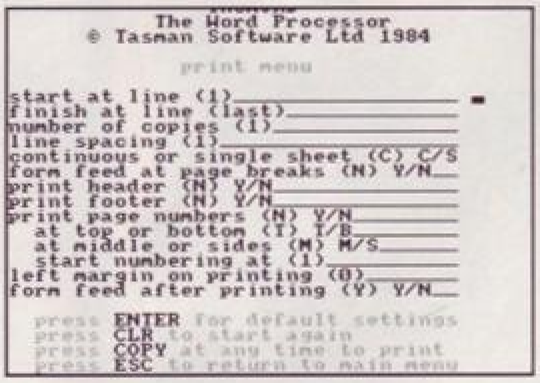
IF ONLY...

Alas, further upgrades of the program are unlikely. Tasman states this would not be within their policy. This is a pity. The ability to print out in two columns would have been nice, but this, Tasman advises, would be almost impossible to achieve on an 8-bit micro – there are even problems with 16-bit machines. It would be nice also to be able to print specified pages rather than having to state line numbers at the printing stage, and a speedier way of moving blocks of text around would also come in handy – as would a quality spelling checker. Other tasty additions would be an on-screen word count, an opportunity to format disks from within the program, and the facility to alter or erase filenames without having to go through the whole LOAD and SAVE process.

more, you are likely to need, and with *Qualitas* the improvement in print quality is surely worth the time taken to set up the two programs.

But *Tasword 6128* doesn't end there. It has a second character set filled with numerous signs and symbols which can be incorporated into your text if you use an 8-bit printer port. It can print labels, and it has a data merge facility whereby multiple copies of letters, for example, can be printed out, each with a different name and address. This facility needs a full tutorial of its own to do it justice.

As far as the CPC range goes, however, the 6128 version is the final one. What you see on screen is what you get, not just in terms of text



● *Tasword*'s Print menu is comprehensive but straightforward to use.

printed but also program development.

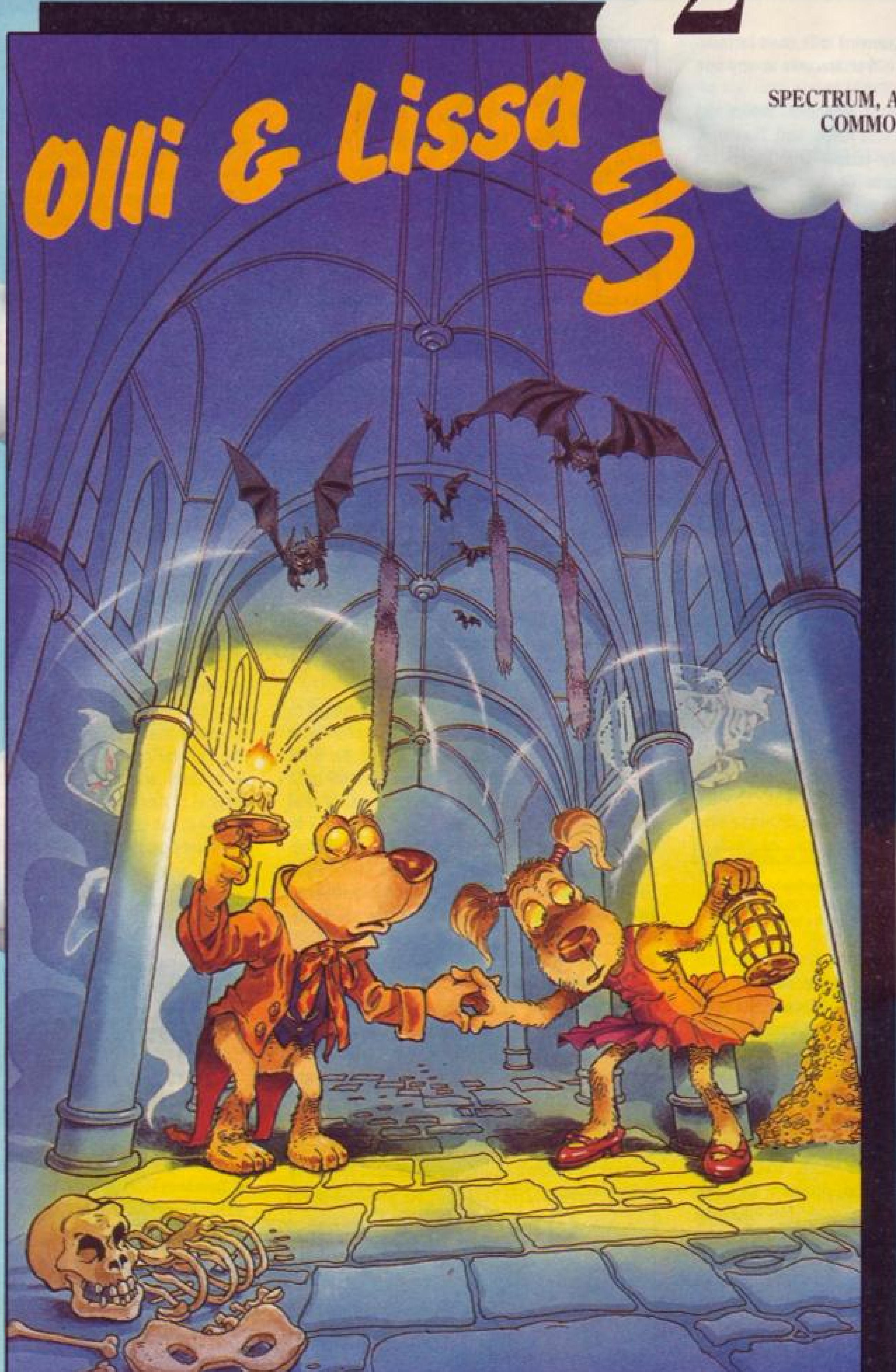
Tasword has many things going for it. Ease of use, the need to know only a few simple commands and *big* text file storage in memory, to name but a few.

Yet surely this was what the 6128 was created for (or 464 with memory upgrade) because there is no point paying for extra memory if software fails to use it efficiently. This program is no toy, nor is it freebee software aimed at the casual user. It is still a quality program with professional applications and deserves to be treated as such.

And that was the whole point of this reappraisal. What *Tasword can* do seems to be ignored by its critics who are only concerned with its apparent drawbacks. Software, it seems, has to conform to fashion, and *Tasword* has been unfashionable for a long time – without cause.

£2·99 *"Look out for great new games in the Cartoon Time range from CodeMasters"*

SPECTRUM, AMSTRAD CPC, COMMODORE 64



No. 2

COLLECTOR'S EDITION

Continue the Adventures of Olli & Lissa in "The Candlelight Adventure" – even better than the original Best Seller!

All Cartoon Time Games feature special Cartoon Characters, some you will already know, others like FRANKENSTEIN JNR. are new to the World of computer games.

The Cartoon Time games are a Collector's Series, each with its own unique number. Look out for the great Prizes from Character T-Shirts to Trips to DisneyWorld!

CARTOON TIME

CodeMasters, PO Box 6, Southam, Warwickshire CV33 0SH

ACTION TEST

Ouch! We've some real scorchers this month – get those asbestos gloves!

MASTERGAME
Power Drift p50



BATMAN – THE MOVIE

Ocean ● £9.99 cass, £14.99 disk joystick/keys

The mist-shrouded night is pierced by a shrill scream. A mugger's body hits the ground, his booty scattered around him. A shadow disappears into the dark alleys of Gotham City to continue its hunt... the Dark Knight has returned, and he's looking for prey.

Jack Napier's got to laugh. In fact he's been unable to do much else since the accident. Falling fifty feet into a chemical cocktail wasn't exactly hilarious, but the results were hysterical. His face turned white, his hair green, but he got one wicked sense of humour into the bargain. But, as he's the first to admit, "You can't make an omelette without breaking some eggs".

The stage is set for a classic confrontation.



● The Batmobile eludes Joker's van.

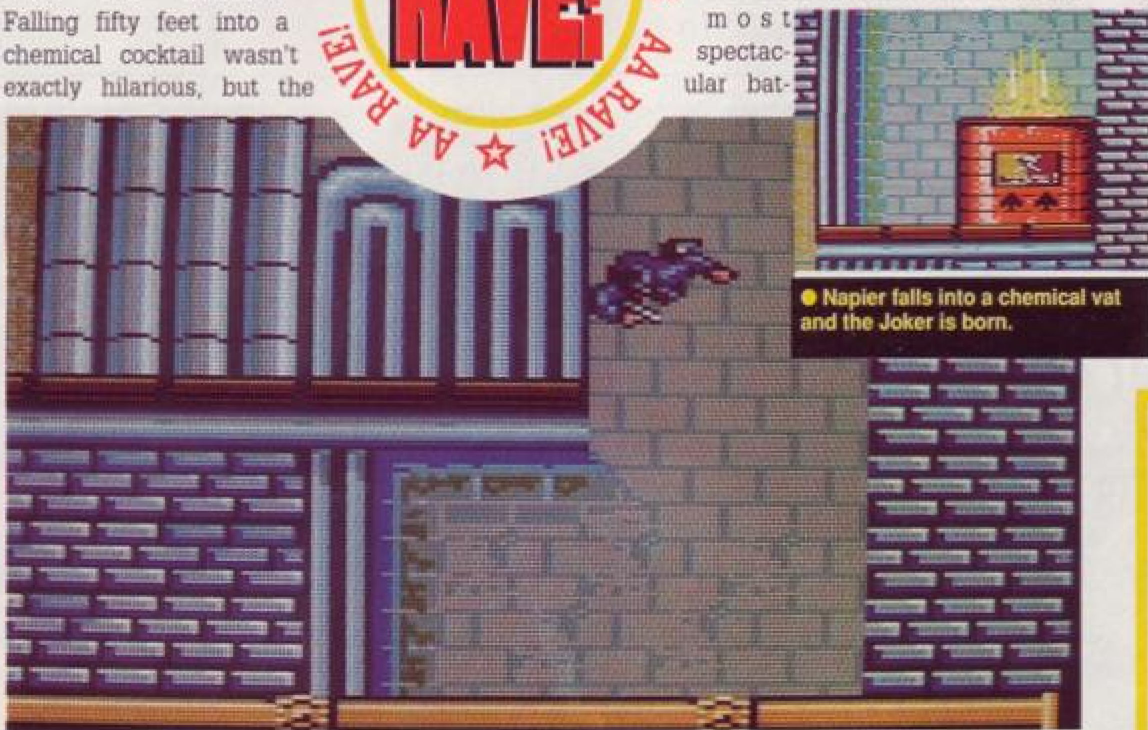


● Batman climbs the Batrope to the next platform.

AA RAVE!

A twisted criminal genius and a caped crusader bent on revenge are about to come to blows in the most spectacular battle since Goliath's re-match with David. The Joker's twisted mind has brought together a bunch of hardened criminals and some pretty evil plans, but Batman has that nice left hook and all the futuristic hardware a crime fighter could wish for. Who will win? Forget Messrs Keaton and Nicholson, this one's up to you.

● Napier falls into a chemical vat and the Joker is born.



● At the end of Level One Jack Napier falls from his platform after a well-aimed Batarang shot.

The on-disk-movie opens in the Axis Chemicals warehouse. Jack Napier (the Joker) is trying to recover some incriminating documents and naturally Batman wants Jack. The plant is a maze of twisted pipes and vats, leaking toxic vapours that injure on contact. To make matters worse there are so many of Napier's men after Batty, you can hardly move without having to kill one – a crying shame! Your tools are the Batarang throwing stars, Batrope, that funny rubber suit and native Gotham grit.

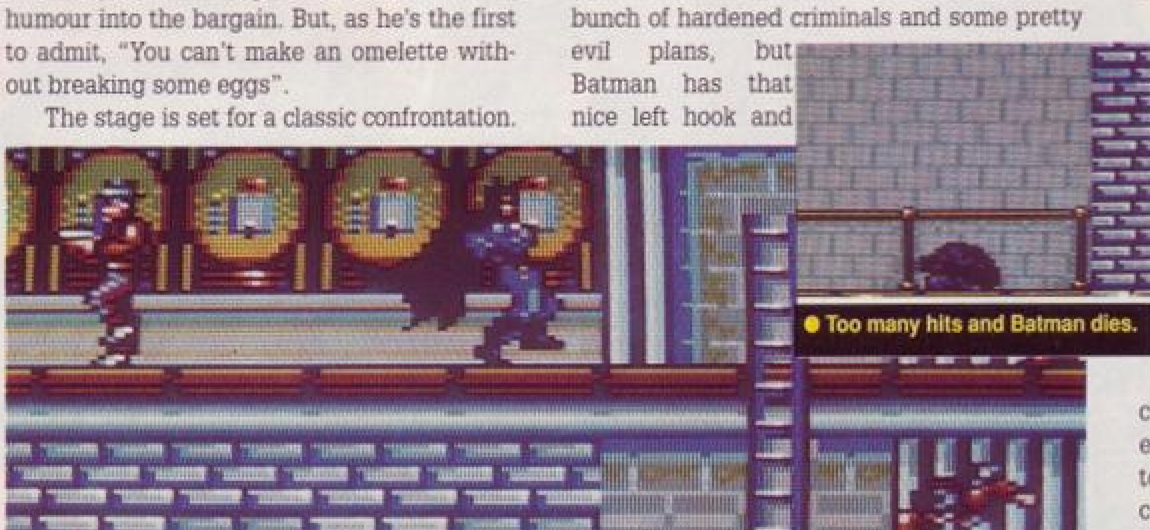
> ### SECOND OPINION
> *Holy guano, Batman! Despite the hype, Batman – The Movie has turned out to be excellent. Brilliant graphics combined with spot-on gameplay provide a Zzzzapping game you'll be playing long after the present batch of Bat-mania has died down.*
> *AW*
>
> **GREEN SCREEN**
> *Couldn't be batter*

The factory's a multi-platform building and our hero has to find the soon-to-be Joker. Normal people use the ladders to change levels but real men use Batropes. It looks dead smooth, is good fun, and makes you a harder target for Jack's gun-toting, bomb-throwing thugs (booo!). Add this to the difficulty of dodging the leaking chemicals that weaken you every step of the way, plus a tightish time limit, and it's a total house of pain.

Having battled your way past these obstacles in the best superhero fashion you're expected to use what little energy you've left to give Jack Napier a helping hand – into the chemical crucible that will transform him into the malicious Joker. A great touch, as the energy bar showing how long you've got left to live is a portrait of Batty changing to reveal the visage of the laughing madman himself.

The factory is a dark and dangerous place where a bat may feel at home but your average games player doesn't. But it looks sweetness and light compared to the chase through the Gotham City streets in the infamous

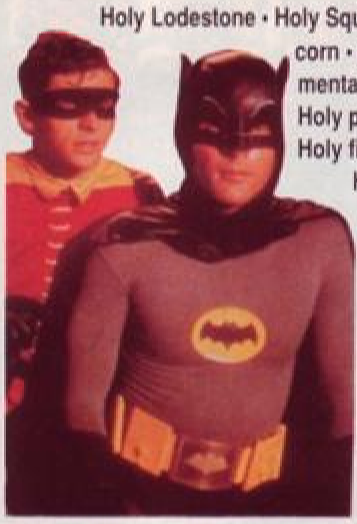
● Too many hits and Batman dies.



● After sending one thug flying Batman is shot from behind and valuable energy is lost.

HOLY UTTERANCES!

It was the 60's TV series that thrust Batman upon the world stage. This camped comedy version was famous for its crushing puns and awful dialogue. Most memorable were Robin the Boy Wonder's exclamatory remarks. Here are twenty of the more outrageous, comments you never even dreamed could be said with a straight face:



Holy Lodestone • Holy Squirrel cage • Holy Sub Orbit • Holy popcorn • Holy rising hemlines • Holy uncanny mental processes • Holy Zorro • Holy ravioli • Holy priceless collection of Etruscan snoods • Holy fishbowl • Holy astringent pomite fruit • Holy chutzpah • Holy cliché • Holy purple cannibals • Holy knit one, purl two • Holy Paderevsky • Holy nonsequiturs • Holy skull tamper • Holy Werner von Braun • Holy travel agent • Holy chocolate eclair

● Holy duality! Batman and Robin, inventors of new levels of profanity.

Batmobile. A huge 'Vet with a nuclear motor, this black beast has the power to literally tear up those backstreets. Unfortunately it does share the handling characteristics of its American ancestors – i.e. an overweight dead cow with a sprained ankle! To negotiate corners you need to send out a grappling hook to grab hold of lampposts to help you turn that much quicker.

Still in the land of the living? Then the next challenge is the product identification test. You've got to find out which of the three products Joker has poisoned. If they're used together then they form a deadly laughing gas that leaves the corpse with a fixed and ugly grin on the kisser. This cannot be allowed to continue as the products chosen are those of the personal hygiene variety, and Gotham City will grind to a halt if ozone and people-friendly deodorants cannot be found. There are limits! Taking a man's property is pretty low, but robbing him of the ability to raise his arms in public is beyond a joke.

Once you've solved the problem with the smellies then you climb in to the Batwing and head downtown to have a look at the big parade. You aim is to stop the Joker filling the streets with poisonous gas balloons, which means flying your plane in and out of the streets and houses to catch them.

Finally, you're Bat on the street again, chasing the Joker and his mad minions into Gotham City Cathedral. As in the Axis Warehouse, you're in hot pursuit of the foul felons, up and over the belfry stairs. The Batrope and its grappling hook come in more than handy here again as you fire it up to the next level, avoiding the steps where you're a sitting duck. Then after you've beaten his cohorts you get to face up to the man you created in the first scene. Complete this and you're the real superhero, not Batman.

The whole game is held together by the graphics, which manage to capture the spirit of the movie, menace and comedy combined in an atmospheric film game. Batman himself is great. His cape flaps, he ducks, dives and jumps. When finally beaten by the Joker's hordes he slumps to the floor, cape billowing out over him, a broken and battered man. The Batrope allows you to attack, climb and swing to dodge shots, the Batarangs are accompanied by a heroic pose when thrown.

The vehicles are disappointing but play well and prove to be a strong part of the game. As you hurtle along, the Batmobile is seen from the side, guided by huge white arrows on the road. Turn when you see the sign or you've got to spin and drive against the traffic to have another crack at it. A view from above and behind might have been better and more realistic, but viewing the car from the side keeps the movie motif alive.

The action in *Batman* is constant rather than overwhelming. It erodes your nerve, forcing you to make that one vital mistake that will cost you your last energy and send you straight back to the first level... That's right – none of those credit things, a blunder can cost hours of intensive gaming and yet another visit to the Axis warehouse.

On tape it's a multiload, but even this can't disguise the game's innate playability and addictiveness. Soon you forget the film and begin to create your own superhero mythology, taking great pride in killing awkward-to-reach bad guys with over-the-shoulder shots from the Batrope, and swing out of grenades' way when the going gets a little too hot even for the Dark Knight.

Surely it's impossible for any game to live up to such hype? Is the Caped Crusader just 'a wimp in a rubber suit'? No. The game's the best movie licence this year – if not ever – capturing the same dark and dominating air that pervaded the film. It still manages to retain its own personality and doesn't just trade on a famous name. Dance with the devil in the pale moonlight, and you're assured hours of frustratingly addictive gameplay. TW



BATCHALLENGE

Fancy some extra cash? There's a tasty cash prize awaiting the first Complete maps – as much detail as possible please, villain placements etc – sent to the AA office.

BATHISTORY

- **Batman was first drawn in 1939 by Bob Kane.**
  He first appeared as *The Batman* in *Detective Comics*, a masked vigilante out to avenge the murder of his parents.
- **Bob Kane also drew strips called Rusty and his Pals and Clip Carson. Criminals to Batman were "a cowardly superstitious lot" so he chose his disguise to strike terror into their hearts. "I must be a creature of the night. Black, terrible...that's it...I shall become a bat!"**
- **The Batman appeared in Issue 33, of Detective Comics. Within a year he had his own mag.**
- **Robin was introduced to the strip in in 1940, to humanise the dark vicious loner image The Batman had acquired.**
- **The first full-length movie was actually a 1943 15 part cliffhanger serial joined at the edges and called An evening with Batman and Robin.**



● Batman leaps to surprise a Level One heavy.

FIRST DAY TARGET SCORE

45,000 points

The Verdict

GRAPHICS 90%
- A do-it-yourself movie.
- Holy artwork, what fun sprites!

SONICS 52%
- Good theme music.
- What, no Prince?

GRAB FACTOR 81%
- Tricky but easily learned moves.
- You'll go far fast.

STAYING POWER ... 93%
- Four levels of fun, one of puzzles.

AA RATING 90%
- Outstanding movie licence.
- Yes, a hyped game can be THAT good!



● A wrong turn on Level Two and you're nicked.

POWER DRIFT

Activision ● £9.99 cass, £14.99 disk
joystick/keys

The California sun does strange things to people, especially those in open-topped cars. Why do we say this? Because it makes them want to *Power Drift*! To charge around insane circuits constructed out of old railway sleepers at 243 kph, taking hairpin bends on two wheels hollering insults at each other.

AA MASTER GAME

In arcades the world over, the coin-op has caused people to lose their lunch on a stomach-churning ride to the limits of motor racing and beyond. Risking being hurled into space after cresting hills and finding a ninety-degree hairpin staring them in the eye was what drew them back time and time again!



● Choose both driver and course before the off.

Power Drift is a racing fantasy, super-powered off-road cars racing head to head over a course more suited to roller coasters than cars! The essence of the game is summed up in its name, a mad charge into corners losing all traction in a bid to get past that bozo who just span you out.

The arcade was the natural successor to *Out Run*, with its hydraulic cabin taking you right over the high side. We all saw what a dog that turned out to be, though, so can there be any hope for *Drift*?

Yes. More than hope, there's glory there too if you're crazy enough to try. After months of work Activision's programmers (the same team which did *WEC Le Mans*) have managed to come up with an awe-inspiring nightmare of a game that redefines the parameters for fantasy racing on the CPC. Five different courses have been shoehorned into 64K in a drive you'll never forget.





● Cousres hang in space just the way bricks don't.

Set in the California desert, the tracks are made out of rough tarmac, loose gravel and logged overpasses. They aren't long drawn out affairs like Le Mans or Monaco but tight, small sprint circuits where he who dares wins and those who ride and slide come out on top. Victory on these roads is harder than you might first think, though. The track is narrow, and the competition fierce.



● Rev up and go when the lights hit green.

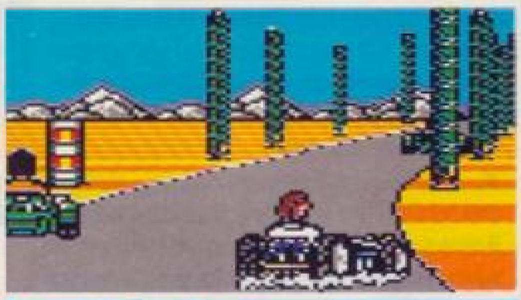
The other cars aren't just there as moving obstacles but actually race you to the line. Four laps of mayhem are the result as 12 dune racers battle it out for third place or better to qualify for the next round.

Races need drivers, and a batch of 20-odd road-hogs are ready and willing to let you ride their machines. Rumour has it that one of Sega's infamous unannounced options was a different personality for each driver, with the lady in blue (supposedly a racing mechanic) taking the title of the heaviest right foot in town – something the programmers of the conversion rigorously deny. But if Sega can do it why can't Activision?

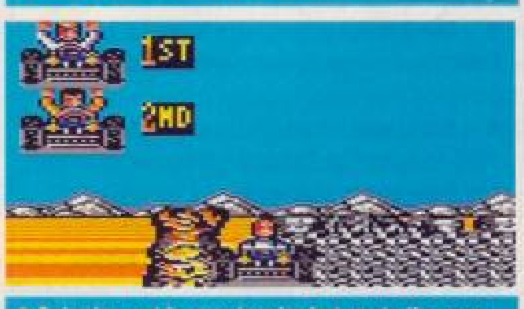
After choosing whose colours you'll defend on the field of high octane honour, it's time to choose your track. Here the brownie points really start to pile up, because there are a staggering (and if you complete them all you will be staggering!) 27 totally original tracks to burn rubber on. Multiloaded in themed batches of five per course, they form a progressively increasing challenge.

There are different locales to look at in the background, but it's the tracks and their twists and turns that matter. Just for good measure there are two bonus levels thrown in too – just like the arcade – one simple and one ultra tough.

Once you've made a choice, the count-down is on. A winged light clock clicks off and you throttle up and head into the unknown. The only way to play this game and win is by a combination of practice and a photographic memory. As you jockey for position down an opening straight, always, always



● Power drifting lets you undertake opponents.



● Spinning out is spectacular but costs the race.

keep both eyes on the road for signs of that first and crucial bend. Cars pull up alongside you, in front of and behind you, ready to take

SECOND OPINION

Not as fast as the arcade original, but what do you expect? The fascinating, twisting courses still spin at you from nowhere though – just like the arcade. Very, very playable. Come on Trent, let's have another go... **RL**

GREEN SCREEN

It gets the green light from here.

advantage of the slightest slip and send you spinning into space.

As soon as the corner appears, slam on the the power and swing the car into a slide, aiming at the apex – and with practice you'll be able to exit perfectly. Reading the road you'll develop a sixth sense for when to



● The twisting courses are unforgiving of mistakes.

straighten up and scream past the opposition. Get it wrong and every driver on the track will try to nudge you into the barriers – or worse, into space.

The slides are the focus of *Power Drift* and they add a whole new element to the art of driving. No longer have you got to sit behind some bozo who thinks fast means 28.5 miles per hour. Drop into a bend at the right speed and you'll drift past them. The effect is enhanced by the cars' handling. None of this quantum stuff – one press of a button and you're facing ninety degrees left. You can regulate the degree of control you surrender to skidding in an attempt to win.

The graphics aren't going to win any awards for prettiness. They're blocky, but they work! They move at speed, the colours are bright and they respond quickly to your hurried joystick waggles. They capture the spirit of the arcade even if they do fail to imitate it directly. What is important though is not that it look like the coin-op but plays like it, and the compromise is well struck.



● A crash here and you spin of into space.

The music is straight from the arcade – and is therefore highly annoying – and sounds off during most of the races. The



● The top of the screen shows you how fast you're going, which lap, which round and who you've got to overtake to finish in the top three.

graphic demand on the poor Z80 means that on some tracks the sound effects are absent, but who need the noise when you're undertaking someone at a ton plus?

The most impressive feature of both arcade and CPC versions is the way the elevated tracks seem to be supported by nothing, just appearing out of the horizon. Spinning off here can have you skidding to a stop and rejoining in mid air, or sent on a spectacular slide right across other parts of the track.



● The winner's car and position are shown as they finish.

You've only got two gears in this race for speed freaks – fast and very fast. The flexible control on the corners and visual clarity make *Drift* an excellent choice for the car nut this Christmas, and an absorbing test of reaction for the any committed gamesplayer. The short tracks require maximum concentration, meaning that all the races are winable but unforgiving of the slightest mistake.

We've always been told not to drink and drive, but to *Drift* and drive is electrifying. It's legal, you get better control and it's much, much more dangerous... **TW**

FIRST DAY TARGET SCORE

Complete four tracks in a row

The Verdict

GRAPHICS 82%
- ■ Unsophisticated...
- □ ...controllable and fast!

SONICS 62%
- □ Arcade theme music is well duplicated.
- ■ Sometimes the sound effects disappear.

GRAB FACTOR 94%
- □ Dangerous high-speed fun.
- □ The arcades humour's still there.

STAYING POWER ... 86%
- □ 25 tracks!
- ■ Finishable, but that won't stop you coming back for more!

AA RATING 91%

□ Mould-breaking racing fun!



● Power into the corners to induce a slide.

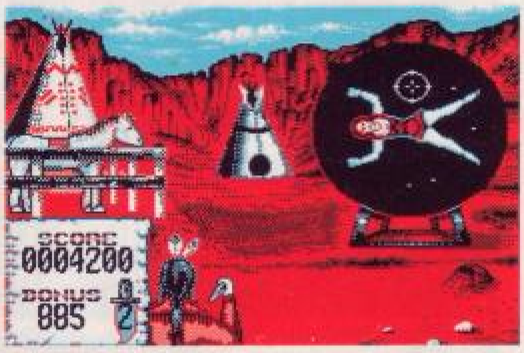
BUFFALO BILL'S RODEO GAMES

Tynesoft ● £9.95 cass, £14.95 disk joystick/keys



Howdy Pardner! Seems the rodeo's comin' to town, and to git some respect round here, you're gonna have to beat those cotton-pickin' two-bit varmints in six of the toughest, roughest dog-gone events this side of Dodge City. You're gonna have to be good though, 'cos you'll be competin' against up to three of yer best buddies. Ride 'em cowboy!

Knife Throwing is the first event of the world's greatest Wild West display. Your beautiful young assistant is strapped to a rotating target, and a steady hand is needed to hurl your blade as close to her as possible without severing any major arteries.



● Left a bit, right a bit, fire...

Next comes Trick Shooting. You've got to blast away the bad guys as they pop out of the ground, taking care not to waste the innocent bystanders. Once you've shown off your skills with the stationary targets, a quick bout of bottle shooting rounds off the event – bottles are lobbed into the air and you must fragment them in mid-flight with your trusty six-shooter.

Calf Roping concentrates on your skill with the cowboy's mainstay, the lasso. Climb on your horse, chase the poor little cow, throw the noose round its neck, and pull it to a stop. Brace yourself in the saddle, or it'll be you who's taken for a ride.

You'll need a fine-tuned sense of balance when it comes to Bronco Riding, and piting your wits against a wild stallion. He's trying to throw you, so you'll have to balance just right to stay on for any length of time.

You have to take the bull by the horns in Steer Wrestling. Jump onto the back of a savage beast and force it into submission, wrestling it to the floor by the horns.

The show's grand finale is the Stage Coach Rescue. A coachload of upright citizens have been taken hostage by a Red Indian, and you must catch up with the speeding wagon, dodging luggage thrown down by the reckless redskin on the way. Leap from your horse onto the roof, and beat him senseless in a good old fashioned fist fight.



● Yahoo! Keep your balance or bite the dust.

The game loads with the US national anthem playing merrily away and a picture of good ol' Buffalo Bill waiting for entrants to roll-up for the all-American extravaganza. Up to four players can join in the fun, each typing in their name, and selecting joystick or keyboard control mode. Slightly annoying for joystick users is the fact that the space bar on the keyboard has to be pressed frequently (this is especially frustrating on the trick shooting section, where it's used to reload the gun). Once all this is done, and events chosen, the game loads in the first section.

All sections have their own tune, and all have impressive graphics. The gameplay is a bit on the simplistic side however, consisting either of basic hand-to-eye co-ordination or furious joystick waggling. Yet the competitive element when several people play at once makes it great fun. Each event can be played as many times as you like, so the final score can be doctored somewhat by replaying the inividual sections until a near perfect score is obtained.



● Use all your stength to down that stubborn steer

SECOND OPINION

The attractive graphics and a thin veneer of gameplay disguise a multi-load bore. **RL**

GREEN SCREEN

Loses its graphical appeal, which doesn't leave much else.

The game is a multi-loader, so tape-based users will have to endure several minutes of loading time per section – often longer than it takes to actually play the games themselves.



● Gun down the bad-guy – he's in the middle.



● Bottle shooting - smashing fun!

TAMING THE WEST

● Knife Throwing: Anticipate the movement of the board when throwing. Once you find a sucessful spot, go for the same place each time.

● Trick Shooting: Don't follow the bottles all over the screen, trying to zero in with your six-shooter's crosshairs: keep your aim level and track them horizontally, firing when they cross your sights. If you've a quick enough trigger finger, position the sights slightly above and to the right of the bottle thrower. You'll hit those bottles every time.

● Bronco Riding: Ignore the main display – it's easier to watch the smaller balance-ometer instead.

● Stage Coach Rescue: Don't waggle the joystick too frantically: you'll make steadier progress with slower, more regular movement.

Buffalo Bill's Rodeo Games is fun for the first couple of goes, but it's not exactly going to keep you going for months on end. It may occasionally surface from your collection when you have a few mates round and you want something you can all play together though. **AW**

FIRST DAY TARGET SCORE

50,000 points

The Verdict

GRAPHICS 86%
☐ Beautifully drawn backdrops.

SONICS 75%
☐ Different tune for each event.

GRAB FACTOR 69%
☐ Fun at first.

STAYING POWER ... 39%
■ Interest soon fades.
■ Tedious loading times for tape users.

AA RATING 61%

☐ Nice to look at.
■ Becomes boring to play.

EPYX® EPYX® EPYX® EPYX

5 ACTION PACKED GAMES, 1 ACTION PACKED COMPILATION

- IMPOSSIBLE MISSION II™
- CALIFORNIA GAMES™
- STREET SPORTS BASKETBALL™
- 4 X 4 OFF-ROAD RACING™
- THE GAMES WINTER EDITION™

A combination of heart-stopping action and breathtaking athleticism that will leave you wondering ...
IS IT REAL ...
OR IS IT EPYX?

AVAILABLE ON:–
CBM 64/128 Cassette.
SPECTRUM 48/128K,+2 Cassette.
AMSTRAD CPC Cassette/Disk.



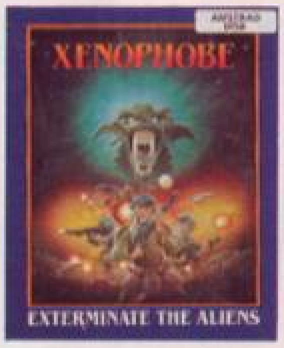
U.S. Gold Ltd,
Units 2/3 Holford Way,
Holford,
Birmingham B6 7AX.
Tel: 021 625 3388.

U.S. GOLD®

EPYX® EPYX® EPYX® EPY

XENOPHOBE

Microstyle ● £9.99 cass, £14.99 disk joystick/keys



Aliens – don't you just hate 'em? They come down here, sliming up our planet, eating our buses, stealing our jobs... We all know what they're like, we've seen the movies! One minute 'take me to your leader' and the next they're trying to fit Granny in the microwave. There's only one solution, one thing they understand, and that's a bullet in the bonce – if they've got a bonce that is! A quick blast and they'll never put a foot (or pseudopod) wrong again. Hang 'em high that's what I say – but then, I am a xenophobe...

In *Xenophobe* the game, alien life-forms have taken control of a space station (they aren't endangering anyone, but clash awfully with the curtains), and that's a good enough reason for mankind to declare war on the offending species.

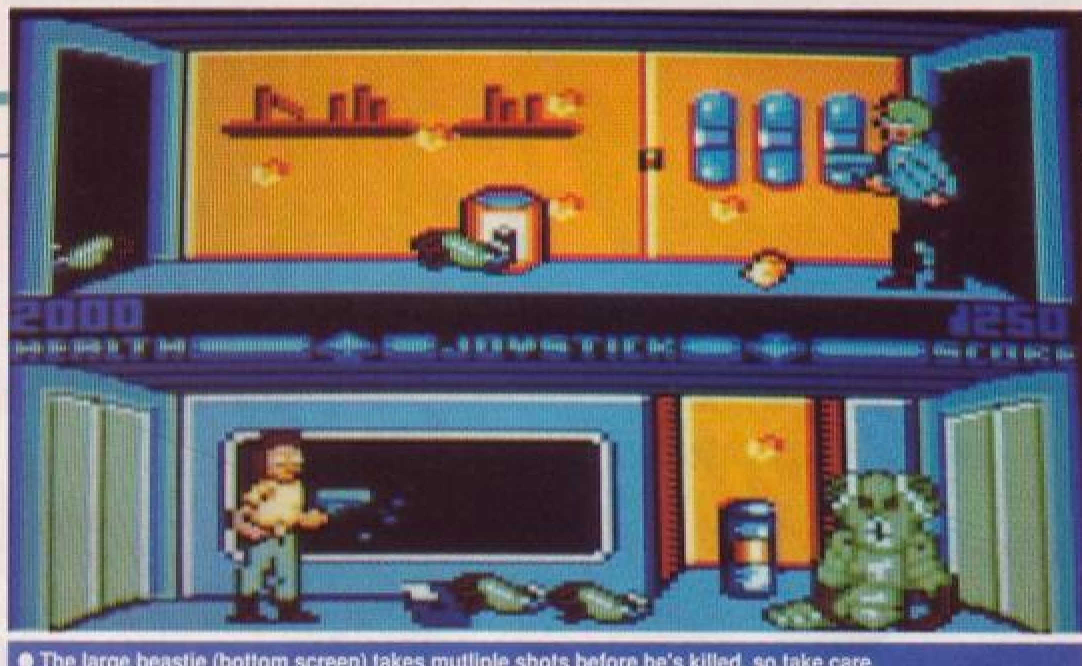
You control one of nine characters fascist enough to hold a grudge against an entire phylum (*no, I don't know why a phylum is either – ed*) of creatures. You get to choose which character to play at the start of the 'Bug Hunt'. Apparently each has a different personality – but who needs personality to pull a trigger? Once you've picked your champion and chosen one or two-player mode, it's time to clean up that space station.

All prepared for the big show, you are told that 'Xenos' have taken control of one of mankind's bases, and that mankind wants it back. There's also some very vital equipment that has to be retrieved at all costs. Your mission is simply to go in there and trash the slimeballs, grab the kit and get out.

The ship approaches the planet/station/satellite and you're beamed down right into the heart of this alien nation. All you've got to protect yourself is a pretty poxy blaster and your mobility. Running speed can't be improved but the firepower at your fingertips most certainly can. Littered about each complex are numerous weapons of varying type, each having a different use and effect. You can only carry one weapon at a time however, so choose pistols with care. One of the game options is for limited ammo, so loads of loaded guns are a must.

The aliens come in a whole variety of species, shapes and sizes, each having a trait that only experience teaches. Alligator creatures roll themselves into a ball in an attempt to bowl you over. Hanging vines grab you lovingly by the head and give you the kiss of death, slowly sucking vital energy points out of your system. There are even space leeches which cling to you if not





● The large beastie (bottom screen) takes mutliple shots before he's killed, so take care.

shot immediately, draining away valuable life force until you exit the room.

Xenophobe is regulated by both time and energy points. The mission stipulates you have to kill a set number of Xenos in a given time period. Piece of cake really – all you've got to do is wander around blasting into oblivion every little life forms that pops its head up. That's how things start out at any rate, but they soon become harder than even the most rabid alien hunter could dream.

The problem with zapping the Xeno scum



● Three of your potential team members.



● Dr Udderbay gets savaged by a space slug, while Mr Eeeze is surprised by a crocodile lizard.



● Col Schickin, Mr Eeeze and Dr Zordirz.

back into their pools of primordial phosphorescent slime is that you've got to get close to do it. In most cases you've actually got to stand next to the creature in question to blow its brains out. Not an easy task, even if these aliens are the densest race of beings in the history of history itself. You see they tend to have large families.

Some rooms contain screens which display how much time there is left or how many aliens there are left to fry. Other features you can employ on your hunt for evil green nasties are lifts and teleports. Simply by turning to face the wall you can find your way all over the place.

The collectable objects are just left lying on the floor, and when you shoot past them a neat reminders pop up in the middle of the screen – 'pick up bomb' etc. The weapons, too, are just scattered around, giving you the opportunity to upgrade form a common phaser to laser pistols, elctro guns and pulse rifles.



● Col F Truth, Mr Fogg and Dr Udderbay.



● The aliens attack from both above and below.

All hurt various monsters better and exhibit different characteristics like range and power (there being a correlation between strength of shot and the distance you can stand from the target).



● If things get too hot you can escape via teleport.

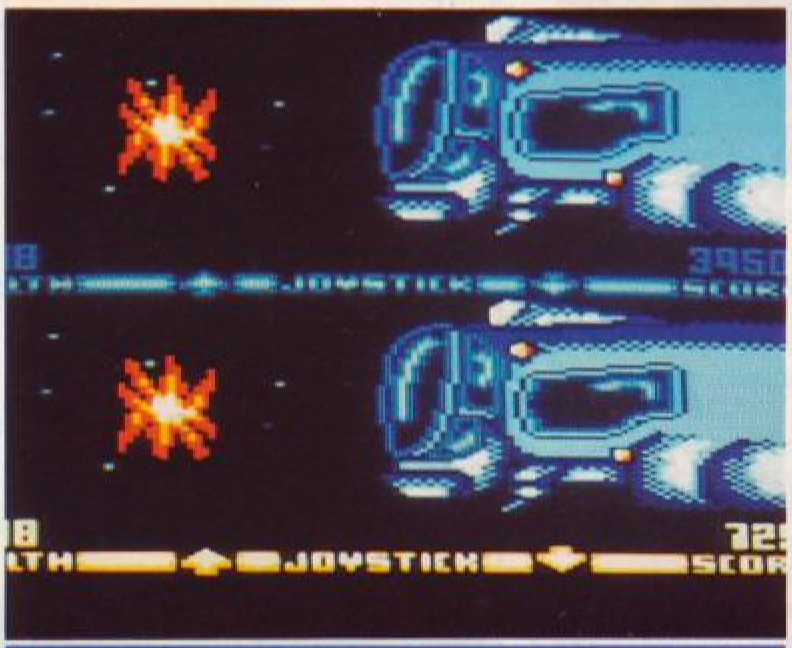
SECOND OPINION

Flickery graphics always damage a game and **Xenophobe** is no exception. It's a lot more fun with two players but this means someone has to suffer the keyboard controls. Fun for a few hours but your interest soon fades. AW

GREEN SCREEN

Playable even in emerald hues.

Whichever style of game you select, your hero's antics are confined to half the screen. In two-player mode both players' wanderings are visible; in one-player mode just the top half of the screen is utilised, mimicking its arcade parent. The characters themselves are great replicas of their coin-op originals, maintaining the balance between cartoon comedy and reasonable game sprites.



● Fail the mission and watch the base explode from the safety of the ship.

The controls are (ironically) true to the arcade original. They are both temperamental and fiddly. You invariably find that when you want to stand you jump and when you don't want to pick up a wimpy gun you always do! There is also the occasional freeze, especially in two-player games when you're on the same screen and a hint of flicker. This is not a split-second game, though, and these little hold-ups don't impair the game to any terminal degree.

The two-player controls are in fact the major gripe, since the keys are much more difficult to use than the joystick. This is offset by the fact that the game is made miles better and is also easier to play when two get launched on the termination game.

The superbly haunting tune suffers when the dual game mode is employed and this is a shame. It doesn't detract form the fun involved in the game though, which is essentially *Gauntlet* seen from a side view. Your motives are the same – replenish energy, kill the bad guys and collect as many goodies as you can lay your mucky little paws on. This means that the game lacks the subtlety but emphasises action and rapid movement through a hostile environment, reaping corpses as you go.

If you're convinced that when we do meet green men from Mars they will turn out to be as nasty and vindictive as their human counterparts, then *Xenophobe* is the game to play.

The trouble is, if these people hate aliens so much why is it they've got a mutant duck, a chicken creature and the elephant man working on their clean-up crew? TW



FIRST DAY TARGET SCORE

Reach Base Four

The Verdict

GRAPHICS 82%
- ☐ Accurate arcade characters.
- ■ Flickers, with an occasional momentary freeze.

SONICS 50%
- ☐ Great title tune and spot effects.
- ☐ Free audio cassette of soundtrack.
- ■ Everything goes quiet in two-player mode.

GRAB FACTOR 74%
- ☐ Simple principle – kill or be killed!
- ■ Dodgy controls make it hard to start.

STAYING POWER ... 69%
- ☐ Lots of levels, with level-jumping facility.
- ■ Gameplay's too limited to last for long.

AA RATING 71%
- ☐ Good, accurate conversion.
- ☐ Commendable first arcade from the simulator kings.

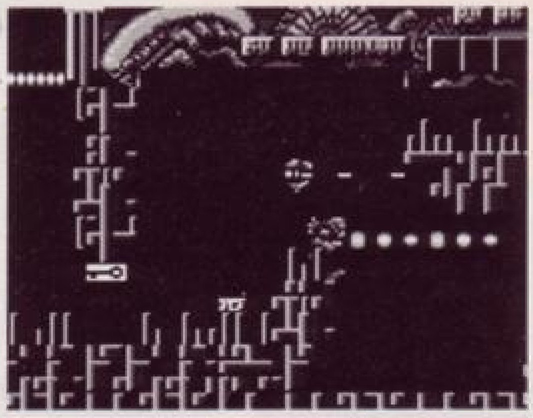
WAR MACHINE

Players ● £2.99 cass only joystick/keys



Are you ready for what is to be a long, hard adventure through an arcade fantasy? Have you got the patience to continually fly into unknown territory, not knowing what snotty space-trash sprites are waiting to blow you to stardust?

That's not the only frustrating aspect of *War Machine*. You attempt to jump from a ladder to a platform... aaaah! You miss and fall, and suddenly your skin is burning and your cute little face is dissolving in an acid bath (*charming – ed*). Your job is to destroy an alien base, and somehow you get the feeling today is going to be a very long day...



● One more step and you're in the acid bath...

War Machine is actually a well-structured, colourful, exciting little game. The graphics are beautifully detailed and well animated. Every alien fights against you so fiercely that you get attached to this game purely because of the pleasure of wiping them out. The game is very playable because of how it's put together. With new rooms to explore, new aliens to encounter, items to collect, the game really is quite exciting. Sound is good too, with a pleasant background soundtrack.

Arcade adventure fans should get this game now. You won't be disappointed – especially at this price. **Mark Hill**

SECOND OPINION

A great original game. Strong colours and imaginative sprites backed up with brilliantly devious gameplay. Only for diehard gamers really, though. TW

GREEN SCREEN

No War-ries...

FIRST DAY TARGET SCORE

Get the third key

The Verdict

GRAPHICS 82%
- Beautifully detailed, clear, colourful and impressive.

SONICS 67%
- Reasonably nice background music with impressive sound effects.

GRAB FACTOR 80%
- First impressions will result in hours of fun.

STAYING POWER 75%
- Determination to discover new chambers will really make your eyes square.

AA RATING 79%
- One of the best budget games we've seen for a while.

RAMPAGE

Hit Squad ● £2.99 cass only keys/joystick/keys



Feel like bite? Then *Rampage* could be just the game you're looking for. Those foolish food additive people have been cooking up all kinds of trouble down at the local burger store and have put it their 'Big Mucks'. As well as ruining your figure and complexion these little burgers also turn you into a 50' high monster. A side effect that does as little to enhance your outlook on life as it does for the skyline. Because – as all giant creatures that arrive in New York – you want to level the place.

The three creatures – George the Gorilla, Lizzie the Lizard and Ralph the Wolfman – have just about had enough, so they're looking for revenge and side salad. Unfortunately, there aren't any pizza parlours with 50' chairs in town so they're going to eat the town instead. The military and police as per usual are out to stop the fun, but the monster militia just see them as lunch.



● Five hundredweight of Rennies, please...

The aim of the game is to avoid being shot, wreck houses, eat people and rip the place to pieces. There's no subtle gameplay – we're talking about 50' gorillas after all – just running jumping and munching.

What makes the game such fun though, is its three-player mode. The two keyboard users have a bit of a rough time of it, but fine control isn't the issue. The game is fun and quite openly tongue-in-cheek. The monsters punch each other, the ground shakes when they jump and if one creature is taken to zero energy they turn back into a human. The problem being that they tore off all their clothes on becoming an ugly sister and have to sneak off screen covering their embarassment.

Huge monsters running riot in town is the stuff of B-movies and gets the treatment it deserves. The cartoon graphics may be a little prehistoric, but then again so was Godzilla and no-one told him he looked silly! This is great multi-player fun from the past. Can these creatures be stopped? I've an idea. It's a long shot, but it might just work... **TW**

SECOND OPINION

Rampage's major failing is the repetitiveness. All you do is tour from city to city and destroy, one ruin looking just like any other to me. RL

GREEN SCREEN

Monsters always look good in green!

FIRST DAY TARGET SCORE

6,000 points.

The Verdict

GRAPHICS 58%
- Good colourful characters.
- ■ Dull backdrops.

SONICS 47%
- OK tune.
- ■ Weak sound effects.

GRAB FACTOR 88%
- Mayhem is great fun!

STAYING POWER 66%
- 150 different backdrops!

AA RATING 66%
- Brutally destructive fun.

SWIFT

software

(01) 738 4889

A Division of Swift Innovations Ltd, 49 Linwood Close, London SE5.

SWIFT SELECTION PLUS DISC £9.95

NEW 21 EXCLUSIVE PROGRAMS

2 Player Chess	Superb representation of a chess board and pieces, including full records of each move – ideal for playing a friend, or play-by-mail games
Arcadians Revenge	Space Invaders like you've never seen them before. This game is packed with fast and furious action that will test your wits to the full!
Claustrophobia	Your spaceship has crashed into an uncharted planet and you appear to be stuck in a maze-like structure, with parts of your rocket scattered throughout it. Will you find them all before your oxygen runs out?
Crane Crawl	You're the foreman in the local widget factory and have been accidentally locked in overnight. What's worse the machinery seems to have a mind of its own, and has definitely got it in for you. Will you see the night out?
Disc Catalogue	Powerful disc cataloguer. Options include automatic running or loading of programs at a key press, easy selection of User or Drive, erase specific files or all backups, rename files and add titles to your discs. Simplicity itself to use.
Guitar Companion	If you have a Guitar, this is the program for you. It shows you how to play 48 different chords – and it helps you tune your guitar too!
Jet Pack Santa	Help Santa to deliver his presents while avoiding all the aliens and obstacles. Fast action arcade-game with many different levels.
Keylist	A handy utility to list all your function key definitions.
Leaper	Guide the frogs to safety across the road and river, avoiding the perils of being run over or drowning. Nicely presented version of the popular favourite.
Life	The old classic. Create your own life forms and watch them evolve.
Master Mind	An oldy but a goody. Designed to illustrate the power of the Procedures utility.
Motor Mower	You've bought a new motor mower for your overgrown garden. But can you cut all the grass without running into the flower beds, rocks and walls?
Munchies	3D Action at its best. Can you fill in all the squares before the munchies get you? And if you do will you survive the next level? ... and the next?
Othello	Hard to beat version of the old favourite, featuring two difficulty levels.
Panic	One of the all-time classic ladders and levels games. There are plenty of puzzles to solve with lots of meanies out to get you.
Patience	Graphically excellent simulation of one of the most popular versions of Patience. Save yourself the hassle of shuffling, dealing and manipulating a real deck of cards.
Procedures	Immensely powerful utility that adds the flexibility of Procedures to your Basic programs. Now you need never use a GOSUB again (often forgetting the line numbers) because you can now call procedures by name!
Space Base	Can you save the Space Base from destruction? With aliens coming at you from all sides in faster and more deadlier waves, will you rescue the base before your shields are depleted?
Tiles	Another must for puzzle addicts. 6 beautifully designed screens are scrambled. Can you restore them to their original state?
Whist	A well-designed and hard-to-beat version of the 9 card game of trumps
Zareba	An extensive arcade adventure which, if it doesn't damage your brain, will certainly leave your joystick in a sorrier state!

STILL ONLY £9.95!

KEYWORD NEW LOW PRICE! DISC £19.95

The dynamic wordfinder for home and business use

- ★ Over 10,000 synonyms and antonyms
- ★ Nearly 1,000 main subject headings
- ★ Extra rapid word search
- ★ Can select over 70 words at a time
- ★ Simple operation
- ★ Flexible 'roam' facility
- ★ Can be used as a Thesaurus
- ★ Compatible with Protext rom



SPEECH! TAPE £4.95 DISC £7.45

Your CPC can now talk back for as little as £4.95!

Speech! is an incredible piece of coding. Needing no extra hardware and taking up just 8K of memory, it converts your CPC's sound chip into a full-blown speech synthesiser!

Once installed you can call it from your programs with a single RSX - plus you can fully configure it to speak in any accent or pitch, through any of the three sound channels.

Due to a bulk purchase we can offer this unique program to you for less than half price. But place your order soon as they're sure to be in high demand.

	Tape	Disc
RRP	£9.95	£14.95
Our Price	£4.95	£7.45

AVAILABLE EXCLUSIVELY FROM US!

ORDER FORM

Access

Please tick the program(s) you require

	Tape	Disc
Pandora	£24.95 ( )	£29.95 ( )
Keyword	—	£19.95 ( )
Swift Selection Plus	—	£9.95 ( )
Speech!	£4.95 ( )	£7.45 ( )

I enclose a cheque/Euro cheque/PO made payable to:- *SWIFT SOFTWARE*

VISA

Name

Address

Postcode Tel.

Access/Visa:

Exp. Date: Signature:

SWIFT SOFTWARE AA12, FREEPOST, Ellesmere Port, South Wirral L65 3EB. Tel: (01) 738 4889

MR HELI

**Firebird ● £9.99 cass, £14.99 disk
joystick/keys**

AA RAVE!

Muddy Hell, this is one hot LZ! You're in a chopper that's flying into the kind of firestorm usually reserved for kamikaze pilots and Iranian airliners.

'Heli's teeth' is your first reaction after loading, as the ultra twee theme tune starts to drill into your subconscious the way only game jingles can. Because of the title and music you're expecting *Skweek* in airborne form, when what should load up but the best strategy shoot-em-up seen this year, with all manner of ships, ghosts and gun emplacements putting up flak while you divide, conquer and kill! Cute I can tolerate, violent I love!

You are *Mr Heli*, and you've got to save the planet. None of this negotiations malarkey – though, we are talking high-level, heavy-duty, armageddon.

The evil scientist known only as 'the Muddy' has taken over six levels of an 'Earth type' world and is hiding underground. He's unbalanced the forces of nature and must be stopped, but the only thing he'll listen to is the sound of your guns. Ready? *Mr Heli* was born ready!

With the jolly little jingle playing in the background it's time to dust off as you fly through a cave looking for a helipad to take you to the next level. In your way are millions of the Muddy's henchmen. Mostly they swarm at you in small shuttles or blast away from gun emplacements, although there are some heavies you can find if you really look.

To fight off these waves of nasties you've a small front-firing gun and a rocket launcher in the roof to shoot things overhead. When you've landed the rocket launcher starts hurling bombs forward. The actual numbers of enemies and shots on screen are daunting, yet the game never suffers slow down due to chip overload. The sprites react fast and accurately, giving you the precision needed to even contemplate the chance of survival in such an overtly hostile world.

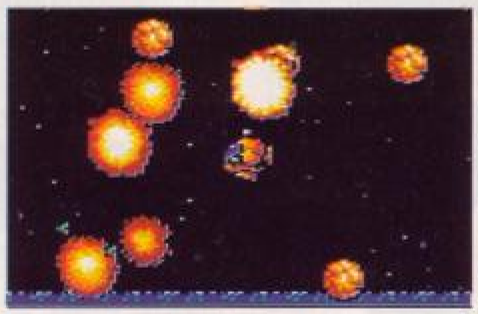


● An all but indestructible end-of-level guardian



● Land on that helipad to reach level two

Your standard firepower is nowhere near good enough for the serious battle chopper about town, though. Hidden in the walls are crystals which you can collect to give you purchasing power at the various special weapons squares throughout the complex. Collect the cash, stop and shop, and soon even the most diehard Muddy fan will be rocking to your tune.



● Shoot the rocks to find cash crystals

As you scroll around the one way landscape there is a danger you can't ignore – the border. You can't retrace your steps, so if by some miscalculation you find the scenery scrolling down while you're moving up, the result is an explosive crush. This stops you getting too tooled up and makes the shooting harder in places like the floating boulders section. The Muddy's influence over nature has caused these rocks to take off, blocking your path and threatening to squeeze you at the top of the screen, so you've just got to blast them out of sight! What a shame!

● The brown cubes contain either cash or weapons

This cutesy treatment of future warfare is taken to farcical extremes by the graphics, which are bright, colourful and highly amusing. The thundering of exploding Muddies rattles the speaker system, temporarily blotting out the (annoying) tune. Despite this continual destruction, though, the game doesn't centre on the enjoyment of killing but the speed of movement and the quickness of reactions – although a bit of gratuitous blasting is good for your system, if not theirs!

If you want heavy duty action and close, accurate infighting, *Mr Heli* can stand and blast with the best. It doesn't get the adrenaline flowing the same way as an *R-Type* because your character is so superior to those he fights – but it's a damned close run thing.

Remember what General Sherman once said – 'War is Heli!'. TW



● As you fly down you've not only got to shoot the bad guys, but avoid being trapped by the scenery

SECOND OPINION

Trenton hasn't done the game justice. The animations are excellent, especially the way Heli waddles along when on the ground. A classic shoot-em-up with massive firepower and one I'll certainly play for a long time to come. AW

GREEN SCREEN
The flight path is clear.

FIRST DAY TARGET SCORE

80,000 points

The Verdict

GRAPHICS 89%
- Cute but strong sprites.
- Bright and imaginative use of colours.

SONICS 74%
- Irritatingly memorable theme tune.

GRAB FACTOR 82%
- Simple to play first time round.
- Gets hard very quickly.

STAYING POWER ...65%
- Six levels of pure explosive fun.
- Maybe a touch too easy.

AA RATING 81%
- A brilliant original game.
- A helicopter game that avoids Vietnam – awesome!

ACTION FIGHTER

Firebird ● £9.99 cass, £14.99 disk
joystick/keys

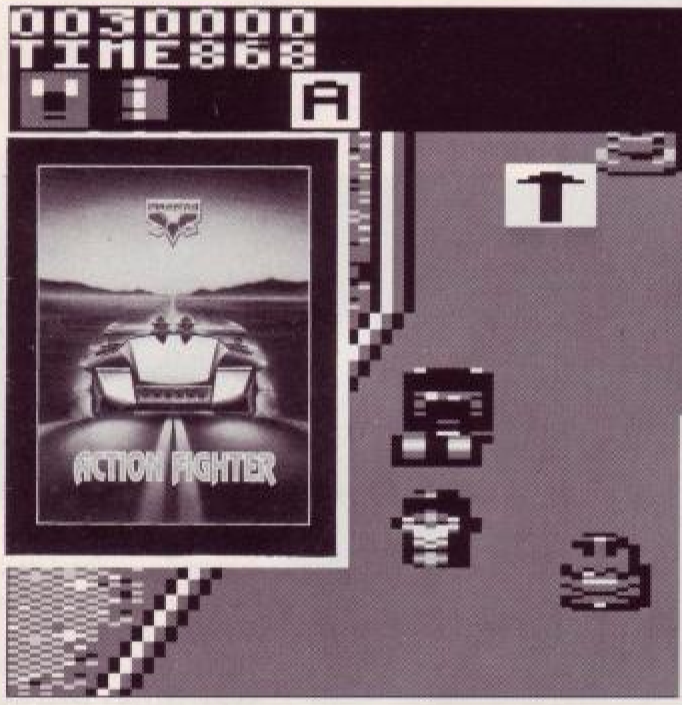
America's quaking in its boots. U-Boats have been seen in San Francisco bay and the call has gone out for *Action Fighter* to come and save the day. There's one small problem, though. Mr *Fighter* has gone down with a heavy cold and his mum wont let him out until Thursday. You're the only one who can take his place. You've got the weapons, you know the score, but have you got the style?

Action Fighter's ace in the hole is his car. No ordinary motor, this baby has the ability to change from a car to a bike to a plane at the flick of a switch. Add the on–road modifications available from the Sega truck and he's truly invincible. His missions involve tearing along shooting everything and anything until the crisis is over – not a terribly rational solution, but fun.

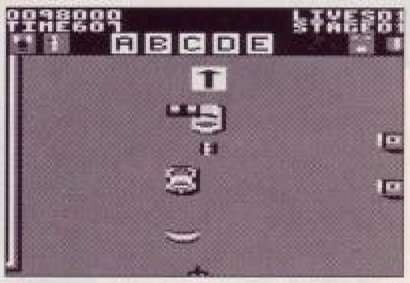
Racing through the streets (or the skies) Action Fighters want to kill as many enemies as possible, because besides gaining points there's the chance of grabbing some extra firepower. Starting with a measly single cannon ain't no fun, so you must kill foes by the bucketload to gain double front blasters, bombs/missiles, back-fire-power and even limited invulnerability! All you've got to do is line up behind the Sega truck that chortles into play and use it as a drive-in armourer's.

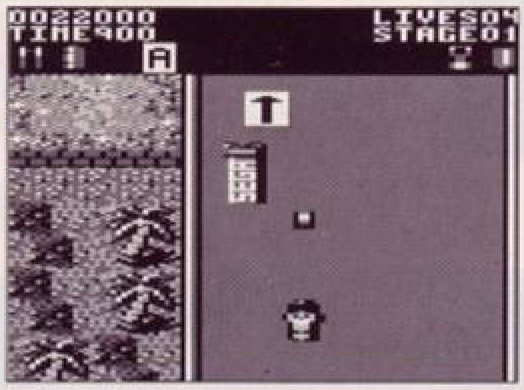
Before you're allowed to do any shape-changing, though, you need to collect four letters that destroyed cars have left lying in the road. Once these are in the bank you can change to the more manoeuvrable bike or the sturdier car. After that there's only two letters to go before you become the plane and get down to the real business of the day. The first stage is considered to be your drive to the harbour, when you get your wings and then soar out over the bay. Your missiles become bombs, and it's U-Boat-popping time. Quite why you can't fly there in the first place, avoiding all that on-road nastiness, is never made clear – but there you have it.

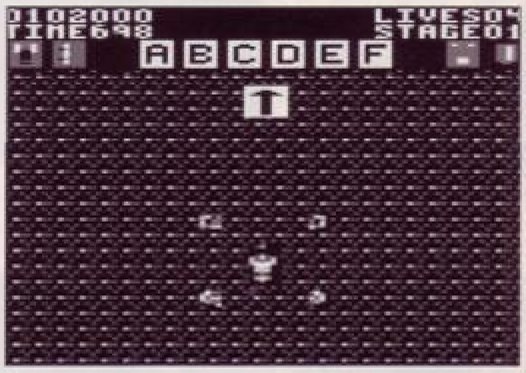
Airborne, you keep any weapons you had before (kiss them goodbye if you die) but you get a bomb sight in front of you to help trash the nasty Nazis below the sea.



● Touching the kerb as a bike is fatal.


● The car is tougher but slower.


● Drive into the Sega truck for special weapons.


● As you fly off the end of the pier, the bike changes into a car and then a plane.


● Once airborne, life's more dangerous than ever.

Unfortunately, the Action Fighter's life is not a happy one. You see there's plenty of shooting and killing, but little else. There's no pace to the game and everything happens exactly when you expect it to. Continual shooting and dodging is initially good fun, but it doesn't have much staying power. Interest would be increased if the game moved at more of a lick, but as it is everybody ambles along casually disregarding the fact they're being shot in the bot by a super car/plane/bike.

The graphics too follow in this vein – they're perfectly competent but not awe-inspiring. The scrolling scrolls, the sprites sprite, but none of this happens at the reflex-numbing speed which makes vertical shoot-em-ups so appealing. The sound is limited to the occasional crash, and so even dying loses its appeal.

Coin-ops are like going to the movies for the home gamester. Now while we'd all happily trot out to spend our cash on *Lethal Weapon 2* or *Forgotten Worlds*, no sane person would queue in the rain to watch *Neighbours*. Likewise you can't imagine being drawn to this Sega coin-op. Five years ago it may have been state of the art but now it's just average. A realistic conversion like this can't therefore hope to be a classic game unless the programming team find something dynamic to add to the program.

Unfortunately, even the great team at Core Design (of *Rick Dangerous* fame) haven't managed the impossible. The result is a playable but completely forgettable product. TW

SECOND OPINION

If I'd seen it in the arcades five years ago I wouldn't have played it then, either. Pretty enough but shallow and hackneyed gameplay. ***RL***

GREEN SCREEN

FIRST DAY TARGET SCORE

50,000 points

The Verdict

GRAPHICS **66%**
□ Works well enough...
■ ...but not exactly awe-inspiring.

SONICS **25%**
□ It's got sound effects...
■ ...but very little else.

GRAB FACTOR **78%**
□ Quickly-learned blasting fun.
■ Unoriginal theme and execution.

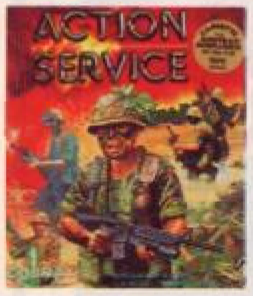
STAYING POWER **65%**
□ Six levels...
■ ...if you can muster the enthusiasm.

AA RATING **54%**

■ Average shoot-out that lacks thrills.

ACTION SERVICE

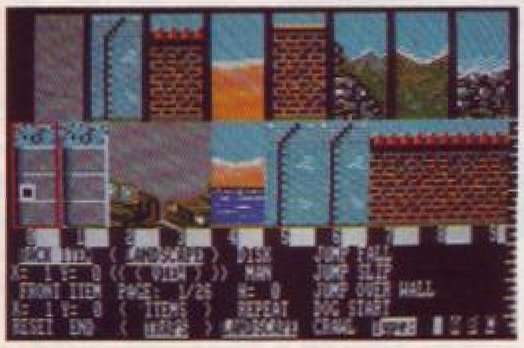
Infogrames ● £9.95 cass, £14.95 disk joystick/keys



Tired and battle-weary from recent fighting on the front line, Private Waring staggers back to barracks looking forward to a well-deserved rest. However, General Rod 'Montgomery' Lawton cancels all leave, and orders his battalion to enroll for *Action Service.*

Action Service takes place in a top-secret training camp rather than out on the field of battle. It's the prelude to a special mission, and only the *crème de la crème* will make it.

You'll need to train hard in the three tests: the physical, where you must negotiate different obstacles, clambering over walls, crawling through ditches etc; the risk section, which tests your ability handling incendiary devices: and close combat – beating up your rivals, then blasting them away with rubber bullets. A fourth section combines the three previous tests to make the most gruelling route of all.



● *Action Service* has a built-in construction mode.

On loading the game looks quite promising. The main screen presents you with some well-drawn soldiers of Infogrames' usual high graphical standard. The game options are selected via a pointer that moves (slightly too quickly) over a silver control panel at the foot of the screen. An array of buttons on the panel access the various functions. These are unmarked and so constant reference to the manual is necesary.

Once you have worked out how to actually start the game, the main screen splits in half to reveal a miniscule playing area in the middle. The drill sergeant yells orders at you from the top of the screen, and awards or subtracts points depending on your success at negotiating the course. The panel, which displays your score and time, remains at the bottom. The soldier has a variety of moves, allowing quite complex actions. He runs along from left to right, the screen burst-scrolling as he reaches the edge. Sound is minimal. The tape stops to play a reasonable tune whilst loading, but the game itself is positively mute apart from one or two spot effects.

The manual is poor. For a start, it's written for the 16-bit machines, so it doesn't have the right loading instructions and lists the wrong playing keys. It even describes a video replay mode that isn't available on the CPC version. The playing instructions are slightly confused, and need to be re-read several times before they make any kind of sense.

Gameplay is disorientating, with each joystick action leading to another level of control. For instance, to shoot at something approaching from behind you press fire, then left, then fire, then down...

The gameplay is not fluent, either. Getting back to the normal standing position from any given action involves a variety of different joystick sequences. In the heat of battle you just get completely muddled and end up crawling bewilderedly along the floor instead of lobbing those grenades at the enemy.

The only skill involved in *Action Service* is knowing where the traps are, and not fumbling the fiddly joystick control. This makes it a memory game of the most tedious kind. It's pitifully easy to cheat too – you can easily complete the first two sections simply by crawling all the way! The worst of it is, you get more points doing that than you'd ever be likely to get by doing it properly.



Infogrames has been responsible for some excellent games in the past. *Action Service*, alas, is not destined to join them.... **AW**



● Grab that grenade and get moving.



● Shoot first, ask questions later.



● The graphically impressive main screen.

NEWS FROM THE FRONT

AA's Technical Editor has just returned from some real-life combat on Salisbury Plain. Shots rang out and he looked on with horror as his combat jacket turned crimson. The ammo consisted purely of paint pellets, however, and the battle-ground was only Warminster Woods during a day out playing Skirmish...



SECOND OPINION

Over-ambitious is the only way to describe Action Service. The ideas are excellent, but the implementation is infuriating. Icon-driven games just don't work on the CPC. **TW**

GREEN SCREEN
Well camouflaged.

FIRST DAY TARGET SCORE

Complete Physical and Risk routes

The Verdict

GRAPHICS 82%
□ Up to Infogrames' usual high standards.

SONICS 30%
□ The loading tune's OK.
■ Barely a squeak in the game.

GRAB FACTOR 70%
□ It looks promising.
■ But it isn't.

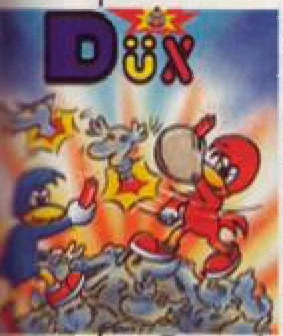
STAYING POWER ... 27%
■ Unbearably annoying.

AA RATING 35%

■ Interesting idea, but that's about it.

DYNAMITE DUX

Activision ● £9.99 cass, £14.99 disk joystick/keys



Think of ducks, and what do you see? Cute little critters bobbing on the village pond? Orange sauce and a piping hot Sunday lunch? Or rocket launchers and boxing crocodiles? If the latter is the answer than you've been playing *Dynamite Dux*...

From the sega coin-op comes the story of Bin, birdland's answer to Rambo. Achacha the Great has kidnapped Lucy, Bin's owner, and Bin must leave the family pond to waddle to the rescue of his beloved Lucy.

Our heroic duck waggles and jumps his way down the street armed only with his mighty duck fist (always thought they had wings!), three lives and a whole load of energy. Onto the road spills the first wave of monsters, the red dog-heads. Glove puppets without a hand, they see Bin and charge, trying to bounce some energy out of him. Your choice is either to run or punch. If you keep the fire button pressed, round swings Bin's wing – until you release the button and his fist lands with a resounding *Batman* POW punch.

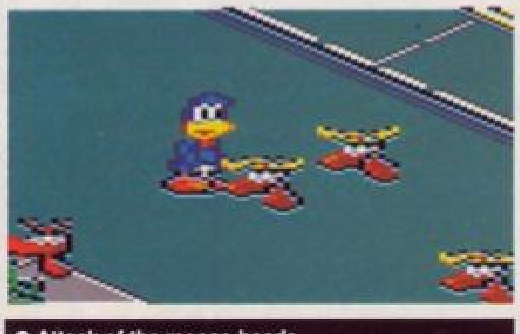


● Taking the subway on level 2.



● The first level rock guards.

This is all you have to do, wandering along meeting (or avoiding) various baddies until you reach the middle and end-of-stage monsters. Gameplay, though, is not merely a set of complicated controls but what you have to do within the game itself. *Dux* scores simple but conclusive points here.



● Attack of the moose-heads.

In your path are scattered various pieces of kit: water cannon, bombs, guided missiles, flame guns and the poultry equivalent of a M16. Keep an eye on your ammo counter, and if the bad guys hit you, some weapons don't function afterward, so stay sharp.



● The cute title sequence.



● Cartoon magic from Activision.

Killing monsters often means they drop a snack to replenish energy. Burgers and cake are favourites. Casks of cash can be nabbed en route too, and they earn some real points. Remember, though, that your primary task is to rescue Lucy, so don't go points crazy. After all, what's the point in being a rich duck? You haven't even got anywhere to keep a credit card! (*Don't answer that – ed*)

The monsters are real in-game entertainment. Sumo piggies, boxing crocodiles, cats with spring stomachs, squashed tigers, flaming birthday cakes, violent rock gardens and huge green serpents are but a few of them.

The levels vary in colour, but not in how they play. The routes are ever more difficult to follow, most levels giving you a choice of direction. On level one you can go via the road or the subway, and contrary to popular belief you're more likely to get mugged on the street than the underpass!

The game just oozes character. Sound effects are functional, but the graphics are entertainment extreme. The backdrops are pure Tom and Jerry, while Bin bears a striking resemblance to Woody Woodpecker. When dying, he leaps into the air, feathers all a-flutter, looking as if he's being strangled and electrocuted simultaneously.

Few games have this much instant appeal. The small playing area is easily overlooked when you are sucked into this *Roger Rabbit* world of tongue-in-cheek ultra–violence. Playing is easy, and so – with a little practice – is great success. But in this game it doesn't matter if you finish in one night or one year, the fun factor here has gone critical so you'll be back for more. Bin the duck is a 'toon who doesn't pull his punches, or his rockets, or his bombs, or his... TW



● Watch out for the crocodiles' flying teeth.



● Collect the bullet, get a gun.

SECOND OPINION

Dux is as cute as they come. A vast arsenal of firepower is at your disposal, making it great blast-em-up. The game might actually be a bit too easy, but it's great fun nevertheless. AW

GREEN SCREEN

Certain backdrops are indistinct.

FIRST DAY TARGET SCORE

Reach level three

The Verdict

GRAPHICS 93%

- Cartoon-quality capers on the CPC.
- Great opening sequence.

SONICS 56%

- Unimaginative effects.

GRAB FACTOR 99%

- Fun. Instant, addictive fun.
- Simple to play for the first time.

STAYING POWER 60%

- Too easy?
- A simple game that will last.

AA RATING 88%

- Dynamite!

GRAND PRIX MASTER

Dinamic ● £9.99 cass, £14.99 disk joystick/keys

The rest of the field have just pulled away from you in a cloud of dust and you've got to catch them to retain your title *Grand Prix Master*. Drop a cog and give it a handful, it's the only way to get past them. You're riding a guided missile with brakes and as well as staying on you've got to win the race. You've sweated blood to qualify for the race and now you're going to show the rest of these losers what speed really means. Finishing isn't good enough – victory is all that counts.

Based on the exploits of famous Spanish motorcycle hero Jorge Martinez 'Aspar', the game allows you to join his dogged hunt for glory on a 'massive' 80cc motorcycle.

Viewing the action from above, it takes no time at all to get the hang of hanging on. You just press the joystick/key in the direction you want to go. The fire button works as the clutch to keep the revs high while cornering, and that's about it. Your little red rider has to use these controls to corner more smoothly, accelerate faster and outride all the other guys to make you the champ.

The trouble is that although the game sounds and looks easy to play, to play well it's a nightmare! Qualifying for a race is all but impossible the first time round. The times reflect those actually achieved in real races so in the simulation version you have to be exceptionally good just to share the starting grid with these real world-class riders.

There are heaps of useful features to help your riding improve, including the ability to read the track before the race and practice before qualifying sessions. But once you go for the real thing, caution has to be both observed and thrown to the wind at the same time. You need to push your moped to the limits to scrape inside the required time, but can only risk losing five bikes in the process, or your season is over.

The whole course scrolls smoothly and quickly, although the playing area is a too small for a clear idea of when the next bend is coming. The controls are different to the usual for this type of game and take a little getting used to, especially the clutch/brake mechanism which lets you make nearly ninety degree turns while travelling at 100+!

Grand Prix Master takes a different approach to the world of racing. It goes for realism, and rather than having to find friends to play against you race the computer over a season. The small graphics are easily controlled, making the game instantly accessible – but the level of skill needed to get into a race, let alone win one, means it could also quickly become the most despised game in your collection. *GPM*'s fun but infuriating, fast but (maybe fatally) flawed on the difficulty front. TW



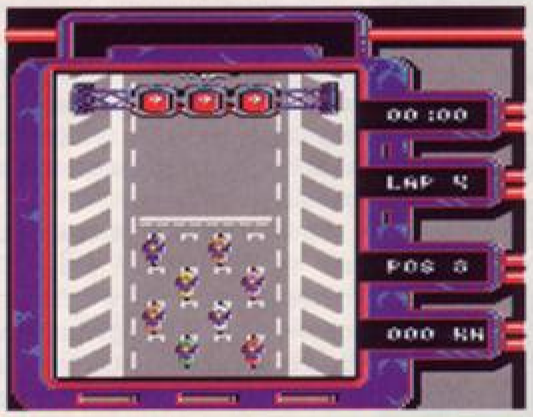
● A good start gets you out of danger from the traffic.



● 'Aspar' screams round on a practice lap.



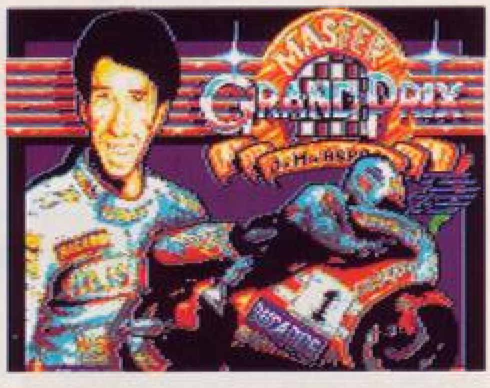
● The race is on and the riders bunch up at the first corner.



● Rev aginst the clutch for a fast start.

POTTED BIOGRAPHY

Jorge Martinez 'Aspar'.
Born 1962 Alcira, Valencia, Spain.
First 80cc Grand Prix Victory – Assen, Holland, 1984.
30 Grand Prix victories overall.
World 80cc Champion 1986, 87, 88, World 125cc Champion 1988.





● Before the race starts you glance at the track.

SECOND OPINION

You can almost smell the burning rubber as you attempt to become the Grand Prix Master. The game is very playable and the graphics are bright and colourful.The screen scrolls very smoothly but the sound is disapointing, and reminiscent sick bumble bee. The many options include a demo and the option to watch the race if you did not qualify. On the whole,an enjoyable little game which should give hours of entertainment. Mark Hill

GREEN SCREEN
Good driving conditions.

FIRST DAY TARGET SCORE

Qualify! For anything!

The Verdict

GRAPHICS **68%**
□ Smooth-moving track.
■ Small bikes.

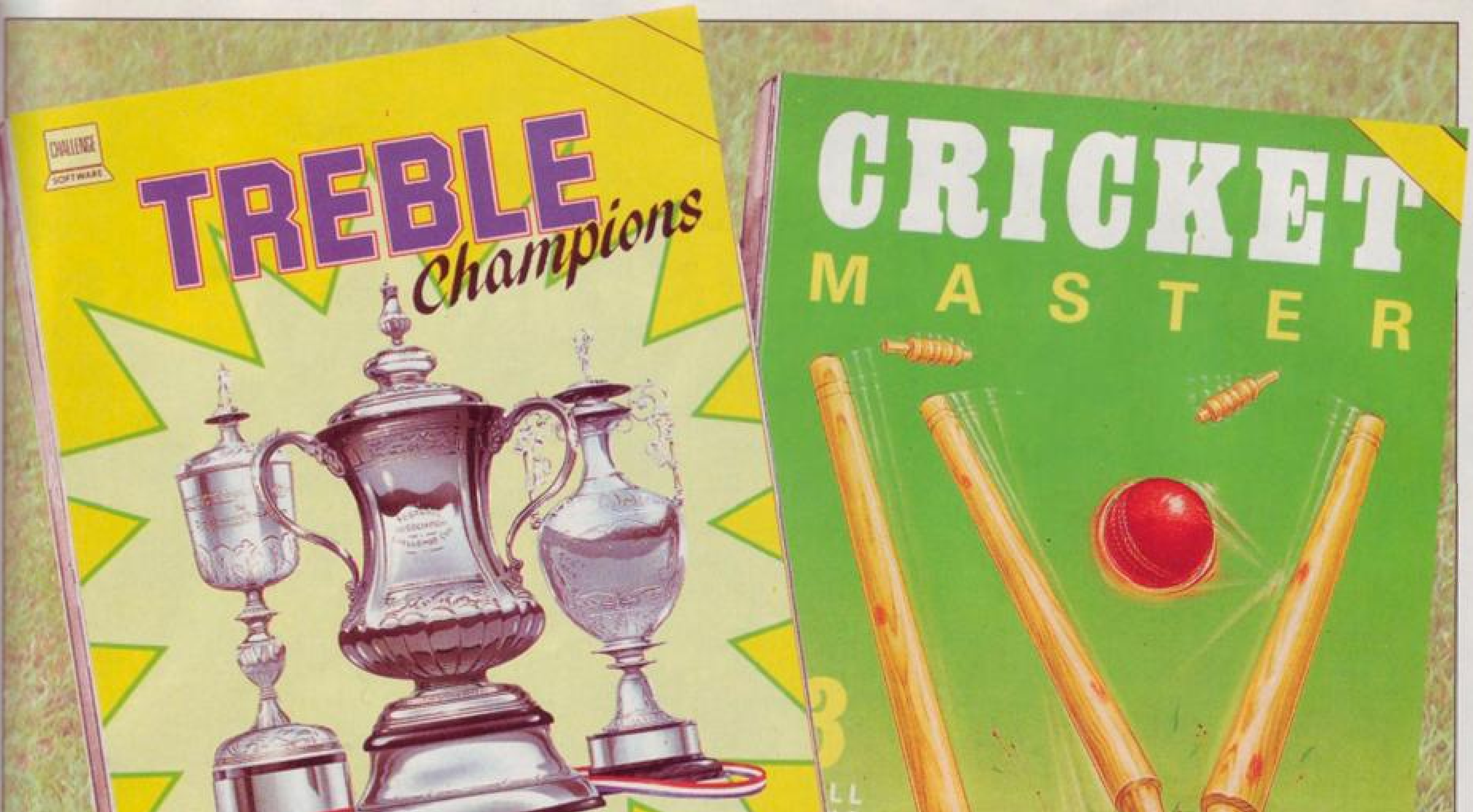
SONICS **12%**
■ The engine whine drives you crazy.

GRAB FACTOR **43%**
■ Too hard to qualify.

STAYING POWER ... **81%**
□ Each course has an access code.
□ Seven courses all over Europe.

AA RATING 61%

□ Good game that's easily picked up...
■ ...but is simply too difficult.



TREBLE *Champions*

STUNNINGLY REALISTIC STRATEGY GAME

Can YOU Win the League Championship, The F.A. Cup and the League Cup?
An Amazing range of Realistic Features and Superb Gameplay combine to create all the Tension, Drama and Excitement of Football Management as you compete for Soccer Glory and THE TREBLE.
With the choice of 3 Skill Levels and the Option to Start in any of the 5 Divisions, TREBLE CHAMPIONS offers a Real Challenge to all Football/Strategy fans from the Beginner to the Expert.
"Treble Champions is possibly the most complete football strategy game to date... It is large, complex and, most importantly, addictive." OVERALL 88% Your Commodore.

CRICKET MASTER

A SUPERB STRATEGY GAME

All the Action and Excitement of one day International Cricket is captured in this Amazingly Realistic Strategy Game.
As TEAM CAPTAIN you will be responsible for Team Selection and your teams Batting and Bowling Tactics, which you can vary from over to over to suit your Match Tactics and the Weather, Wicket and Outfield conditions.
With a Superb Range of Features, Options and Outstanding Gameplay, CRICKET MASTER lets you make the Tactical Decisions that will determine the outcome of each game.
Can YOU succeed in First Class Cricket and Captain your side to Victory against the World's Top Teams?

SPECTRUM SCREEN SHOTS



MATCH SCREEN - Full League Programme and F.A. Cup and League Cup. · SQUAD DETAILS - 100 Teams - Details of over 1500 individual players. · FULL LEAGUE TABLE and Results and League Tables for ALL 5 Divisions. · BATTING & BOWLING ANALYSIS · MATCH OVERVIEW & INFORMATION BOARD · SCOREBOARD & RUN RATES

Spectrum Tape £9.95 · Commodore Tape £9.95 · Amstrad Tape £9.95
Amstrad Disc £13.95 · Amiga and Atari Versions Coming Soon £19.95

Spectrum Tape £8.95 · Spectrum Disc £12.95 · Commodore Tape £8.95
Amstrad Tape £8.95 · Amstrad Disc £12.95

CHALLENGE SOFTWARE

NOW YOU'RE THINKING

Challenge Software: 37 Westmoor Road, Enfield, Middlesex EN3 7LE

TRADE ENQUIRIES WELCOME ON 01 443 1936.

THE CD GAMES PACK



1. BMX SIMULATOR
2. SUPER STUNTMAN
3. FRUIT MACHINE
4. PRO SNOOKER
5. SUPER ROBIN HOOD
6. 3D STAR FIGHTER
7. PINBALL SIM
8. INTER RUGBY SIM
9. DEATH STALKER
10. BMX FREESTYLE
11. DIZZY
12. SUPER G-MAN
13. ATV SIM
14. GHOST HUNTERS
15. STREET FOOTBALL
16. JET BIKE SIM
17. SAS COMBAT
18. BIGFOOT
19. NINJA MASSACRE
20. FAST FOOD
21. ARCADE FLIGHT SIM
22. BMX SIMULATOR 2
23. THE HIT SQUAD
24. TRANSMUTER
25. PRO SKATEBOARD
26. PRO SKI SIM
27. VAMPIRE
28. 4 SOCCER SIM
29. TWIN TURBO V8
30. TREASURE ISLAND DIZZY

Specifications correct at time of going to press

AA SMALL ADS

FOR SALE

CPC464 mono. Full 6128 upgrade (inc manual). D/Drive. DMP2000 printer. Rom board with Protext, Promerge, Prospell, Graduate CPM+ 64K exp. 64KS/Disk. Dust covers, joystick, colour modulator, many games utilities, Books, magazines. £500.
0329 664572.

Computing with the Amstrad Magazine first two years bound volumes All others to end (loose) Amstrad Computer User Magazines first two years bound volumes all others. Offers Les Males, 0755 37536.

CPC 6128 mono screen, TV modulator, Multiface II, DK Tronics speech, Mini Office II, Colossus Chess, Books, magazines. Worth over £500 will sell for £280. Telephone Graham on 033 525 393.

Amstrad C464, colour monitor, disk drive, 90 disk games, 200 tape games, extra memory, filter, Romantic Robot extras too numerous to mention worth £1000+, £500 ono will split. Graham (0707) 331827.

CPC 464 colour monitor, disc drive, modulator, (receives TV), speech synthesiser, Multiface 2, Light pen, over 150 games + joystick. Very good condition £500 ono. Sorry no split, phone Doug on Guildford 503015.

The complete system. Amstrad CPC464, green screen, printer, joystick and loadsa games. Worth over £300. Sell for £165. Tel 0935 20532 after 5.30pm. Write to Mike, 171 Goldcroft, Yeovil, Somerset BA21 4DA.

CPC464, colour monitor, 20+ cassettes of games, joystick. Also included white Melamine computer desk. £200 call 061 486 1970 after 6pm or weekends.

Amstrad CPC464 with monitor plus around 25 popular games and joystick. Good condition £150 ono. Tel 084 421 2783 evenings or 01 930 3477 daytime (Mrs Howard)

Sharewatcher II the ultimate stockmarket simulation is now available. Test your skills on the stockmarket without losing a fortune! £4.50/tape, £7.50/disc, SAE details to: M Pinder, 4 Wham Hey, New Longton, Preston PR4 4XU.

CPC 464 and colour monitor. Joystick, £1000+ worth of games including R/T/Gauntlet, Driller, SDI, Gauntlet 1/2, many compilations, AA mags 17-49, good condition, sell for £420-00 ono contact Paul, Colchester (0206) 43018.

CPC 464, green screen, joystick, games include Robocop, A/Ranger, Gunship, APB, Technocop, Thunderblade, ATF, Crazy Cars 2, F15. Also magazines and manual. Good condition. Sell for £150 ono contact Mark on Colchester (0206) 43018.

CPC 464, colour monitor, built in data recorder, loads of games, joystick, AA magazines from 1986-1989, subscription transferred, manual, few books, cheat mode book, excellent Christmas present bargain!
£300 ono (061) 4320 374.

Amstrad Pace RS232 with Gage Rom installed, also Commstar Rom supplied. Plus Pace Nightingale modem. All fully working condition. Sensible offers please. Telephone Coventry 0203 617671.

Brother printer terminal. Built in serial interface use as printer built in word processor, calculator, battery/mains all extras cost over £240 - £120. Phone Brentwood (0277) 224581 evenings and weekends.

Notebook: the 'pocket' database for the CPC464 (cassette only). Ideal for addresses! Catalogue your record collection! Store those useful notes! Loads in less than 60 secs. Send stamped addressed SAE for details to 35, Aldergill, Heelands, Milton Keynes Bucks MK13 7PT.

Amstrad CPC 464 colour monitor £600 worth of games inc Microprose Soccer, Out Run and Combat School all worth about £1000. Sell for £250 ono. Ring Kim on 01-736 6090. Also inc joystick.

Bargain Amstrad CPC6128 with colour monitor, joystick and over £200 worth of software selling for £400. Tel Armitage (0543) 491554.

Amstrad Action back issues for sale. Vol 1 1-12 £25, Vol 2 13-24 £20, Vol 3 25-36 £15. All in binders. Reasonable to excellent condition. Phone Mike on (0753) 884326 after 5pm.

CPC464 colour monitor plus 189 games worth about £500. Speedking Joystick and Adaptor, everything in tip top condition. Sell for £400 or nearest offer. Phone Dave on 01 789 6050.

CPC464 green screen with TV modulator. £500+ of games many big names included maps and pokes if required, two joysticks, dust cover also v.g.c. Just unused £300 ono Andrew (0273) 302387.

664/6128 puzzle for young and old. Get Lost in a 'Trance'. Your patience will be rewarded. Just apply a little Trancendental medication to your CPC. Monty 06527 584 see advertisers index

WANTED

Wanted pen pals male or female about nineteen years old to talk about various subjects not just computers. Just bought 6128. Jason, 12 Gretton Crescent, Aldridge, Walsall, West Midlands WS9 0DY

SERVICES

Eprom programming from tape or disc 16K max Basic or machine code (ORG at #C000) £10 per Rom (includes Eprom -27128) Stephen Harrison, 6 Oak Walk, Sible Hedingham, Essex CO9 3PE.

Slip-disc tape to disc specialists, from now until 31st January 1990. All games transfers *are free, state 464 or 6128 send tape(s)*, disc(s) and game instructions. Also enclose return postage and recorded delivery costs. This is a free service until 31.1.90. Make cheques payable to: D R Hudson, 13 Cromwell Road, St Austell, Cornwall PL25 4PR (0726) 65640.

USER GROUPS

Amstrad CPC users. Dedicated magaine, free Public Domain software and a host of friendly help and advice. Send SAE to: United Amstrad User Group, 26 Uplands Crescent, Fareham, Hants PO16 7JY.

OTHER

"Amstrad Basic Course" compiled by professional lecturer makes learning pleasurable. No commitments, purchase each lesson separately for cost of magazine. Cancel anytime. includes helpline. Details SAE 68 Northfields, Clowne, Chesterfield S43 4BA.

AA SMALL ADS

This section offers you a really cheap and effective opportunity to speak direct to 38,000 CPC owners – or would-be owners. Users report excellent results.

You can place an ad up of up to 30 words for just **£5**.

So you could use it to sell a printer, launch a user group or advertise a piece of software you've written.

One thing you can't advertise is the sale or swap of software. Such ads can be misused by pirates.

Fill in the application form and send it to us together with payment.

We'll place the ad in the next available issue (published 2-7 weeks after we receive your order).

ORDER FORM

SEND TO *AA* SMALL ADS, FUTURE PUBLISHING LTD, 4 OUEEN STREET, BATH BA1 1EJ

Please place the following advertisement in the next available issue of *Amstrad Action*

Name ____________________

Address ____________________

____

____

Telephone ____________________

I enclose payment of £5.00 by Cheque/ P.O/ Access/ Visa

Credit Card number

____

Credit Card expiry date

____

Classification. Tick ☐ For sale ☐ Wanted ☐ Services ☐ User Groups ☐ Other

Write your advertisement here, one word per box. Include your name and phone number if you want them

K & M COMPUTERS

THE LEADING AMSTRAD MAIL ORDER SPECIALISTS

ADVENTURE	CASS	DISC
Time and Magik	£11.25	£11.25
Gnome II: Ingrids back	£11.25	£14.75
Tolkien Trilogy	£10.50	£14.75
Hitchikers ..(Disc Only)		£19.99
Scape Ghost	£11.25	£14.75

COMPILATIONS	CASS	DISC
Heatwave	£10.50	£13.99
Soccer Spectacular	£10.50	£13.10
Special Action	£10.50	£13.99
The Story So Far (Vol. 2)	£10.25	£11.25
The In Crowd	£11.25	
History in the Making	£15.95	£21.50
Taito Coin-op (inc. Rastan)	£9.90	
Supreme Challenger (Inc Elite)	£9.90	£13.10
Gold Silver & Bronze	£11.25	£21.50
Giants	£10.50	£15.95
Flight Ace	£11.25	£13.95
Arcade Muscle	£10.50	£15.95
Winners	£10.50	£15.95
Par 3	£11.25	£15.95
We are the Champions	£7.75	£13.10
Soccer Squad	£7.75	£11.25
Game Set & Match II	£9.90	£13.95
Space Ace	£10.50	£11.25
KidsPlay	£2.99	

STRATEGY / SIMULATION	CASS	DISC
Kenny Dalgleish	£7.75	
Football Manager II	£7.75	£11.25
F.ball Man.II Expansion Kit	£6.25	£7.25
Football Director II		£14.75
Gunship	£11.25	£14.75
Ancient Battles	£11.25	
Micropose Soccer	£11.25	£14.75
Times of Lore	£7.75	£11.25
Chuck Yeagers Ad Trainer	£7.75	£11.25
3D Pool	£7.75	£11.25
Bards Tale (Phone)	£2.75	£6.25
Passing Shot	£7.75	£11.25
Quarterback	£7.75	£11.25
Treble Champions	£7.75	
The National	£7.75	
War in Middle Earth	£7.75	£11.25
Heroes of The Lance	£7.75	£15.90
Airborne Ranger	£11.25	£14.75
Emlyn Hughes Soccer	£7.75	£11.25
Gazza Soccer	£7.75	£11.25
Track-Suit Manager	£7.75	£11.25
Laser Squad ... N	£7.75	£14.75
4 Soccer Simulator	£7.75	£11.25
Archon Collection	£2.75	£6.25
Championship Golf	£7.75	
Carrier Command		£14.25

EDUCATIONAL	CASS	DISC
Answer Back Jnr	£7.95	£11.95
Factfile 500s	£3.75	£6.75
Fun School (U5s, 5-8, 8-12)	£5.50	£7.95
Maxi Maths (Geometry)	£8.50	£13.95
The Three Bears (6128)		£15.95
Happy Breathing (12-16)		£13.95
Magic Maths (4-8)	£8.50	£12.95
Maths Mania (8-12)	£8.50	£12.95
Chemistry GCSE	£11.90	£14.95
Physics GCSE	£11.90	£14.95
Biology 1 (12-16)	£8.50	£12.95
Wordhang	£7.50	£11.95
Happy Writing	£7.50	£11.95
Physics 1 (12-16)	£8.50	£13.95
Mapwork Geography Quiz	£8.50	£13.95
Spanish Tutor	£12.95	£15.95
French Mistress	£12.95	£15.95
German Master	£12.95	£15.95
Iankey Crash Course ..(6128/PCW)		£19.90
Iankey Two Finger ..(6128/PCW)		£19.90
Fun School 2 (U6's, 6-8, 8+)	£7.99	£9.99

ARCADE		CASS	DISC
Powerdrift	N	£7.75	£11.25
Real Ghostbusters		£7.75	£11.25
Run The Gauntlet		£7.75	£11.25
Vigilante		£7.75	£11.25
Rainbow Island	N	£7.75	£11.25
Robocop		£7.75	£11.25
Skweek		£7.75	£11.25
StormLord		£7.75	£11.25
New Zealand Story		£7.75	£11.25
Indy (Last Crusade)		£7.75	£11.25
Continental Circus	N	£7.75	£11.25
Forgotten Worlds		£7.75	£11.25
Red Heat		£7.75	£11.25
Crazy Cars II		£7.75	£11.25
Gemini Wing		£7.75	£11.25
Skate or Die		£7.75	£11.25
Navy Moves		£7.75	£11.25
The Untouchables	N	£7.75	£11.25
Vindicators		£7.75	£11.25
APB		£7.75	£11.25
Purple Saturn Day	N	£11.25	£14.45
Xenophobe	N	£7.75	£11.25
Dynamite Dux		£7.75	£11.25
Batman (The Movie)	N	£7.75	£11.25
Dragon Ninja		£7.75	£11.25
Altered Beast		£7.75	£11.25
Rick Dangerous		£7.75	£11.25
Butcher Hill		£7.75	£11.25
Knightforce	N	£7.75	£11.25
Renegade III		£7.75	£11.25
Xybots		£7.75	£11.25
Cabal	N	£7.75	£11.25
Mr Heli		£7.75	£11.25
Shinobi		£7.75	£11.25
Beach Volley		£7.75	£11.25
Strider	N	£7.75	£11.25

BUDGET	CASS ONLY
Spy Hunter	£2.75
Battleships	£1.80
Nigel Mansells	£2.75
Split Personalities	£1.80
Frank Bruno Boxing	£1.80
Thundercats	£2.75
On The Bench	£2.75
Turbo Esprit	£1.80
BMX Simulator II	£2.75
Ghostbusters	£1.80
720	£2.75
Formula Grand Prix	£1.80
Paperboy	£2.75
Rugby Boss	£1.80
Mig 29	£2.75
Father Christmas	£2.75
System 8	£2.75
Bombjack	£1.80
Twin Turbo V8	£2.75
Shockway Rider	£2.75
B.M.X. Freestyle	£2.75
Roadrunner	£2.75
Kickstart II	£1.80
Rocky Horror Show	£1.80
Postman Pat	£1.80
Jocky Wilson Darts	£2.75
Grand Prix Sim 2	£2.75
Green Beret	£2.75
Treasure Island Dizzy	£2.75
Fast Food	£2.75
Adv. Pinball Sim.	£2.75
Gauntlet II	£2.75
1942	£2.75
Batman	£2.75
Street Cred Boxing	£2.75

Lowest Prices Available on Printer Ribbons

Special prices on A.M.S. Software

StopPress	£39.95
StopPress & Mouse	£72.95
Mouse & Art	£61.95
Mouse Mats	£4.95
Max	£16.95
Extra Extra	£21.95

KDS Electronics Special Offers

Rombox	£24.95
51/2 Second Drive	£158.95
8 Bit Pr. Port	£18.75
Serial Int + Rom	£44.95
Printer T Switch	£24.95
Screen Master	£14.95
Ramdos (Disc)	£23.95
Romdos (Rom)	£27.95

KDS Modems are no longer available

Mini Office II
Still our No1 Seller
Cass £11.25 Disc £14.75

Amsoft/Maxell 3" Discs

One	£2.50
Five	£12.50
Ten	£24.50
5 1/2 Discs TEN	£3.90
3 1/2 Discs TEN	£9.50

A Swift Reduction on Arnor Products

Protext	Disc	£18.45
Protext	Rom	£28.45
Promerge	Disc	£18.45
Promerge+	Rom	£23.45
Prospell	Disc	£17.45
Prospell	Rom	£23.45
Maxam	Disc	£18.45
Maxam	Rom	£28.45
Maxam 1.5	Rom	£21.45
Utopia	Rom	£21.45

All Prices Include Vat & P&P in U.K.
In stock items sent by return of post.

SPECIAL OFFER
ORDER ANY THREE £2.75 Budget games and pay only £8.00

DMP 2000/2160/3000 Ribbons
£3.25 each
£5.99 for Two
£13.50 for Five

ACCESSORIES	
Rombo Rombox	£34.95
464 Keyboard Ext Leads	£6.99
6128 Keyboard Ext Leads	£7.99
Cover Set 464 or 6128	£7.50
Cover Set DMP 2000/2160	£4.50
3" Drive Cleaner	£4.99
Cassette Player & Leads	£19.99
6128 Cassette Leads	£3.50
Lockable 3" Disc Boxes	£9.99
AMS 30L Disc Box	£12.50
Ribbon Refresh	£7.95

JOYSTICKS	
Cheetah Starfighter	£13.95
Konix Navigator	£13.95
Gunshot	£5.75
Cheetah 125+	£7.95
Cheetah Challenger	£4.75
Konix Autofire	£11.95
Konix Speedking	£9.99
Cruiser (Microswitch)	£9.50
Delta	£9.50
Wico Ergostik	£17.75
Amstrad JV2	£13.95
Cheetah Mach I	£10.95
Quickshot Turbo	£10.50
Micro Blaster	£12.50
Race Maker	£25.00
Wizmaster	£12.50

BUS/UTILITIES	DISC
Adv. Art Studio	£19.99
Joystick Splitter	£7.95
Tasword 6128	£19.95
Money Manager	£24.95
Mastercalc 128	£27.95
Qualitas+	£12.95
Masterfile 3	£32.95
Plan-It	£14.75
Professional Adv. Writer	£24.95
Art Studio & Mouse	£49.95
Tasspell	£13.95

HARDWARE ETC	
2160 Printer	£159.95
DDI Disc Drive	£159.95
MP2 Modulator	£29.95
FD1 Second Drive	£99.95
64K Memory Expansion	£47.95
Screen Filter	£19.99
Eprom Storage Box	£1.99
Cont. Paper 2000 60g	£18.50
Cont. Paper 2000 80g	£24.50
Mouse Mats	£4.95
Surge Plug	£12.50
C15 Cassettes	.45
Fanfold Labels (1000)	£5.90
Mouse House	£3.95
RS232 with Commstar	£55.95
Printer Cable	£9.99

NEW LINES AT LOWEST PRICES	
Atari ST Super Pack	£360.00
Amiga Bat Pack	£380.00
PCW8256 (Inc VAT)	£389.00
PCW8512 (Inc. VAT)	£499.00
PCW9512 (Inc VAT)	£510.00
PPC512 (Inc VAT)	£449.00
PC1512 (Inc VAT) from	£449.00
PC1640 (Inc VAT) from	£550.00
PC2086 (Inc VAT) from	£675.00
Utax GRP, 3 fax (Inc VAT)	£999.00
DMP 4000 Printer	£375.00
DMP 3250 Printer	£220.95
LQ 3500 Printer	£375.00
Epson LX800 Printer	£299.00
Commodore PC 1 from	£349.00
80 C Printer Muffler	£85.00

The Amazing AMDRUM
~~£34.95~~
Only **£12.50** from us.

The Magnum Light Gun
With Six Free Games Including 'Operation Wolf'
Please State 464 or 6128
Only £32.95 from us.

K & M Computers (AA)
140, Sandy Lane Centre
Skelmersdale,
Lancs, WN8 8LH

24 Hrs Phone 0695 29046

All items are subject to availability

When ordering please state make of computer.
Please make cheques & P.O. payable to K & M Computers.
Overseas inc. Eire add £1.00 per item of software.
We supply government & educational establishments.

Shop Open 9-6 Mon-Sat

Access/Visa orders by phone or Mail
N = New release
Please Phone for availability and other new releases

VISA

Prop. K. Fairhurst

S.D.C. 60 Boston Road, London, W7 3TR

Other branches at 309 Goldhawk Road, London W12 8EZ
18 Market Square, Leighton Buzzard, Beds. * 675 Holloway Rd, Archway, London N19.
* Unit 33-34 Rumford, Market Street, Romford , Essex (Open 7 days a week 10am-8pm)

BUY BY PHONE
RING 01 741 1222 or 01 995 3652 or 0525 371884

PRICE PROMISE

If you wish to purchase any product from our list and find that you can buy the same product cheaper from another mail order company, simply enclose the lower amount, stating the name of the other company and where you saw the advert. (It must be the current issue). Price Promise does not apply to other companies "Special Offers".

ENQUIRIES
01 567 7621
Office hours 10am-6pm (5 days)

CASSETTE 50
ONLY £2.99
Maze Eater, Cydons, Handicap Golf, Rush Hour Attack, Royal Rescue, Star Trek, Whirly Attacker, Fighter Command, Draughts, Evasive Attaraction, Noughts and Crosses, The King's Cab, Play Your Cards Right, Creepy Crawley, Hangman, Pontoon But, Fireman Rescue, 3D Maze, Colony 9, Backgammon, Solit, Yahtzee, Thee Card Brag, Trucking, Rally 3000, Sitting Target, Nemesis, Space Ship, Jet Flight, Dragcan Maze, Inferno, Ghosts, Fantasy Land, Space Base, Planets, Hopping Herbert, Dynamite, Time Bomb, Day at the Races, Lunar Landing, Space Mission, Rats, Motorway, Dungeon Adventure, Space PCO Rescue, Highrise, Craps, Exchange

GAME SET AND MATCH
ONLY £6.99 (DISC £13.95)
Featuring: Basketball, Soccer, Vault, Swimming, Shooting, Archery, Triple Jump, Weightlifting, Ping Pong, Pistol Shooting, Cycling, Springboard Diving, Giant Slalom, Rowing, Penalities, Ski Jump, Tug of War, Tennis, Baseball, Boxing, Squash Snooker/Pool.

CHRISTMAS COLLECTION
ONLY £8.99
DISC £13.99
Uridium + Lightforce +
Cybernoid II + Eliminator +
Exolon + Hydrofool

SOCCER SQUAD
ONLY £7.99
Footballer of the Year +
G. Linekers +
Roy of the Rovers +
G. Linekers Super Skills

BEST OF ELITE VOL 1
ONLY £4.99
Bomb Jack
F Bruno's Boxing
Commando
Airwolf

STORY SO FAR IV
ONLY £9.99
Ghostbusters +
Aliens + Wonderboy +
Eidelon +
Back To The Future +
Quartet

KONAMI ARCADE COLLECTION
Only £6.50 Disc £13.95
Mikie, Jackal, Nemesis,Jailbreak, Ping Pong, Yie Ar Kung Fu 2, Hypersports, Shao Lins Road, Green Beret, Yie Ar Kung Fu

MAGNIFICENT 7
ONLY £6.50 DISC £13.95
Head Over Heels, Cobra & Arkanoid, Short Circuit & Wizball, Frankie Goes to Hollywood, Great Escape & Yie Ar Kung Fu

SPECIAL ACTION
ONLY £8.99, DISC £12.99
Captain Blood +
Driller + S.D.I.+
Daleys Olympic Challenge +
Vindicators

10 COMPUTER HITS VOL 5
ONLY £7699 DISC £11.99
Dark Sceptre, Tarzan, Catch 23, Mystery of the Nile, Endurance, Mega Apocalypse, Ninja Hampster, Activator, The Boggit, Druid III

AMSTRAD	RRP	OUR	DISC
A.P.B.	9.99	6.99	10.50
Altered Beast	9.99	7.99	11.99
Barbarian II	9.95	6.99	10.50
Beach Volley	9.99	6.50	10.50
Bloodwych	9.99	6.99	10.50
Bomber	9.99	7.99	11.99
Cabal	9.99	6.50	10.50
Chase H.Q.	9.99	6.50	10.50
Continental Circus	9.99	6.99	10.50
Dominator	9.99	7.99	11.99
Double Dragon	9.99	6.99	10.50
Dr. Doom's Revenge	9.99	6.99	10.50
Dragon Ninja	9.95	6.50	10.50
Dragon Spirit	9.99	6.99	10.50
Dynamite Dux	9.99	7.99	11.99
Emlyn Hughes Int Soccer	9.95	6.50	8.99
F16 Combat Pilot	14.95	10.99	13.99
Football Director	8.95	6.50	13.99
Football Manager II	9.95	6.99	10.50
Footballer of the Year II	9.99	7.99	11.99
Gemini Wing	9.99	6.99	10.50
Ghostbusters II	9.99	7.99	11.99
Indiana Jones & The Last Crusade	9.99	7.99	11.99
Iron Lord	9.99	7.99	11.99
Kenny Dalglish Soccer Manager	9.95	6.99	10.50
Kick Off	9.99	6.99	10.50
Laser Squad	9.99	6.99	13.99
Licence To Kill	9.99	6.99	10.50
Master Grand Prix	9.99	6.99	10.50
Maze Mania	9.99	6.99	10.50
Microprose Soccer	14.99	10.99	13.99
Moonwalker	9.99	7.99	11.99
Myth	9.99	7.99	11.99
Navy Moves	9.95	7.99	11.99
New Zealand Story	9.99	6.50	10.50
Operation Wolf	9.95	6.50	10.50
Outrun Europa	9.99	7.99	11.99
Passing Shot	9.99	6.99	10.50
Player Manager	9.99	6.99	10.50
Powerdrift	9.99	7.99	11.99
Purple Saturn Days	9.95	6.99	10.50
Rally Cross	9.99	6.99	10.50
Red Heat	9.99	6.50	10.50
Renegade III	9.99	6.50	10.50
Rick Dangerous	9.99	6.99	10.50
Robocop	9.95	6.50	10.50
Run The Gauntlet	9.99	6.50	10.50
Running Man	9.99	6.99	10.50
Saint & Greavsie	9.99	6.99	10.50
Shinobi	9.99	6.99	10.50
Shufflepuck Cafe	9.99	6.99	10.50
Silkworm	9.99	6.99	10.50
Storm Lord	9.95	6.99	10.50
Strider	9.99	7.99	11.99
Super Wonderboy	9.99	7.99	11.99
Switchblade	9.99	7.99	11.99
The Real Ghostbusters	9.99	7.99	11.99
Thunderbirds	12.99	5.99	10.50
Time Scanner	9.99	7.99	11.99
Times of Lore	9.95	6.99	10.50
Toobin'	9.99	6.99	10.50
Trivia	6.99	5.99	7.99
Tusker	9.99	7.99	11.99
Untouchables	9.99	6.50	10.50
Vigilante	9.99	7.99	11.99
Vindicators	9.99	6.99	10.50
War In Middle Earth	9.99	6.99	—
Wec Le Mans	9.95	6.50	10.50
Xybots	9.99	6.99	10.50

SPECIAL OFFERS	RRP	OUR
Afterburner	9.99	5.99
Arkanoid	8.99	3.99
Arkanoid II	8.95	4.99
Barbarian	9.99	2.99
Brian Clough Football Fortunes	14.95	4.99
Bubble Ghost	9.99	1.99
Chamonix Challenge	9.99	0.99
Contamination	9.99	0.99
Cybernoid	9.99	2.99
Empire Strikes Back	9.95	2.99
Fernandez Must Die	9.95	2.50
Four Soccer Simulator	12.99	4.50
Get Dexter II	8.99	1.99
Grysor	8.99	3.99
Mindfighter	9.99	3.99
Peter Beardsley's Soccer	9.95	4.99
Platoon	9.95	5.99
Quill Plus Illustrator	24.99	3.99
Renegade	8.99	3.99
Return of the Jedi	9.95	2.99
Sorceror Lord	12.99	2.99
Split Personalities	9.95	1.99
Star Wars	9.95	2.99
Strike Force Harrier	12.99	3.99
Tetris	9.99	2.99
Tournament of Death	9.99	0.50
Train (The)	9.95	2.99
Trivial Pursuits	14.95	4.50
Trivial Pursuits New Beginnings	14.99	4.99
Utilities 30 Galore	9.99	4.99
Vera Cruz	9.99	1.99
Vixen	9.95	1.99
Wizball	8.99	3.99

SPECIAL OFFER DISCS	RRP	OUR
A.T.F	14.99	4.99
Andy Capp	14.95	4.99
Brian Cloughs Football Fortunes	14.99	5.99
Empire Strikes Back	14.95	7.99
Fernandez Must Die	14.99	4.99
Karnov	14.99	4.99
Knightmare	14.99	4.99
Mindfighter	14.99	4.99
R-Type	14.99	6.99
Return of the Jedi	14.95	7.99
Spy Vs Spy Trilogy	14.99	3.99
Star Wars	14.95	7.99
Tetris	14.95	4.99

BUDGET GAMES	
720°	2.99
Batman	2.99
Commando	2.99
Crazy Cars	2.99
Gauntlet	2.99
Leaderboard	2.99
League Challange	2.99
Mask	2.99
Powerboat Simulator	2.99
Pretector	2.99
Road Runner	2.99
Rygar	2.99
Scooby Doo	2.99
Soviet Fighter Mig 29	2.99
Super Cycle	2.99
World Games	2.99

JOYSTICKS		
Cheetah 125+ Joystick	9.95	7.50
Pro 5000 Colour (Red or Green)	14.99	11.99
Pro 5000 Joystick	15.95	10.99
Starprose Joystick	14.99	12.99

ANY GAME NOT LISTED PLEASE CONTACT US FOR PRICES AND LIST OF SOFTWARE

LIVE AMMO
ONLY £5.99
DISC £12.50
Rambo
Great Escape
Top Gun
Army Moves
Green Beret

WE ARE THE CHAMPIONS
ONLY £6.50, DISC £13.95
Renegade, Barbarian
Rampage, IK+
Supersprint,

DARK FORCE
ONLY £8.99 DISC £12.50
Last Ninja II +
Darkside +
Batman +
R-Type

5 STAR 1
ONLY £4.99
Spindizzy + Zoids +
Who Dares Wins II +
3 Weeks in Paradise +
Equinox

GAME SET & MATCH 2
ONLY £7.99 DISC £12.50
Matchday II,
Ian Botham's Test Match,
Basket Master,
Super Hang On,
Track 'n Field,
Superbowl,
Winter Olympiad,
Steve Davis Snooker,
Nick Faldo's Open

COMPUTER CLASSICS ONLY
£2.99 DISC £6.99
Zynaps
Dan Dare
Into The Eagles Nest
Aliens
Cauldron II

CHARTBUSTERS ONLY £5.99
Ghostbusters, F.A. Cup Football, Agent X, Kane, L.A. Swat, Ninja Master, Rasputin, Ollie & Lisa, Ricochet, Zolyx, Dan Dare, Tau Ceti, Way of Exploding Fist, Formula 1 Simulator, Brian Jacks Superstar, I-Ball, Park Patrol, Thrust, War Cars, Harvey Headbanger

SUPREME CHALLENGE
ONLY £6.99 DISC £10.99
Elite, Starglider
Tetris, Ace II ,
Sentinel

TAITO COIN OPS
ONLY £8.99
Rastan Flying Shark, Bubble Bobble, Arkanoid II, Slapfight, Legend of Kage, Arkanoid, Renegade

IN CROWD ONLY £10.99
Barbarian, Gryzor, CrazyCars, Predator, Karnov, Combat School, Target Renegade, Platoon

FIVE STAR III ONLY £4.99
Through the Trap Door + Tau Ceti + Exploding Fist + Tempest + Firelord + Aliens (US) + Strike Force Harrier

MEGA GAMES VOL ONE
ONLY £9.99 DISC £12.99
Northstarr, Cybernoid, Deflektor, Mask II, Triaxos, Tour De Force, Blood Brothers, Hercules, Master of the Universe, Blood Valley

STORY SO FAR II
ONLY £9.99
Overlander + Hopping Mad + Space Harrier + Live + Let Die + Beyond Ice Palace

S.D.C. ORDER FORM (AMSTRAD ACTION DECEMBER ISSUE)

* Personal Callers Only

Please send the following titles. BLOCK capitals please!
Type of computer__________

Title:-	Amount
Total Enclosed £	

Name__________
Address__________
Postcode__________
Tel. No.__________

PICK OF THE MONTH — STAR BUY
SOCCER SPECTACULAR
ONLY £7.99 DISC £10.99
Football Manager + Peter Beardsleys + World Champions + Hardball Marathon + Soccer Supremo

Please make cheques or postal orders payable to **S.D.C.**
Orders under £5 please add 50p per tape P&P. Over £5 P&P is **free**.
Europe please add £1 per tape, elsewhere add £1.50 per tape.

VISA

BATMAN
THE MOVIE OR CAPED CRUSADER
ONLY £6.50

BALROG

Balrog reads up on his classics as he tackles Topologica's Avon...

Avon

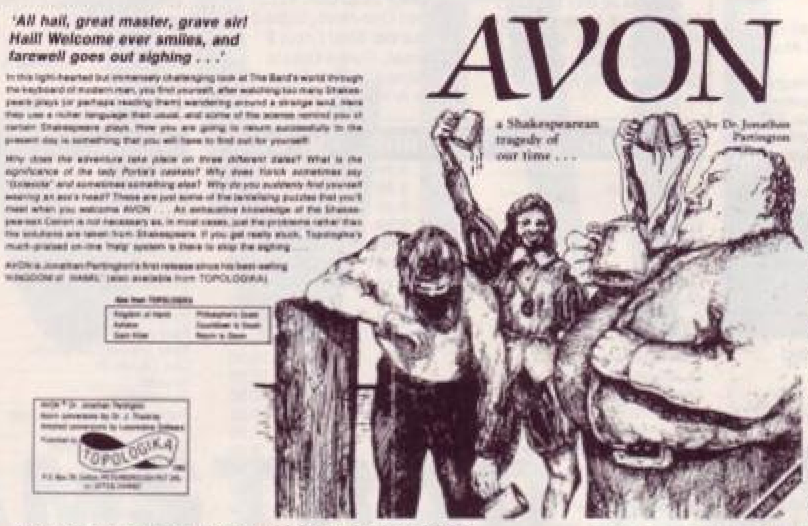
£14.95 disk only ● Topologika ● PO Box 39, Stilton, Peterborough PE7 3RL (0733 244682)

Balrog loaded Topologika's latest game with trepidation. As dedicated Pilgrim readers will know, the Pilg never seemed to like any Topologika game due mainly to the absence of the examine command – would Balrog like *Avon* or not?

Avon is a light-hearted look at the world of Shakespeare's plays (perhaps the real Bard's Tale?). You are a typical American tourist visiting Stratford-upon-Avon, but all is not as it seems... an asp in a pet shop tries to bite you, you could swear that a nearby pine tree groaned at you when you walked past and the three old ladies in the shop acted very peculiarly when you tried to buy their cauldron!

Perhaps your suspicions can be attributed to your own paranoia... but before you know what's happening you find yourself standing in a place unlike Stratford-upon-Avon in one way, yet like it in another. Like the world of Shakespeare's plays, in other words.

As in all good adventures you must discover the route back to the real world – in this instance to save yourself from being held forever in Avon.



Avon is well-written, with many objects, locations and characters taken from Shakespearean plays. Thus there are daggers, eyes of newts, witches and many other weird and wonderful creations – including, of course, blood on hands!

At this point Balrog would like to stress that knowledge of Shakespeare is not needed to complete *Avon*. Although all the various objects and locations are derived from the Bard's plays, the actual puzzles are the same as in any adventure. In short, you don't need an English A-Level to play the game!

The puzzles are difficult in places and quite original, and although the parser is not as powerful as, say, a level 9 game, it is still very comprehensive.

As with all of Topologika's games, *Avon* is text and disk-only with on-line help, lots of descriptive text and atmospheric locations.

Balrog's criticisms of *Avon*? Well, the absence of the examine command is annoying. I must admit that I agree with the Pilgrim on his views that a properly used examine command can add to a game but, having said that, Balg soon got used to playing the game without examining objects and didn't feel it reduced his enjoyment. The only other criticism with the game is that it takes about two minutes to load, as the instructions are printed on the screen every time you play. It's a shame that a short cut could not be found to avoid this wait.

Not one of the most technically accomplished games, but very amusing and enjoyable. A good all round adventure (with an enhanced version of *Monsters of Murdac – AA* rating 75% – on side 2) that deserves to do well.

Atmosphere	**79%**
Interaction	**70%**
Challenge	**85%**
AA Rating	**57%**

Panic Beneath the Sea

£1.99 cass, £4.50 disk ● John Packham ● 60 Hightown Towers, Warburton Road, Southampton S02 6HH

Panic is a two-part adventure *GAC*ed from the keyboard of John Packham. In it you play the part of an unemployed detective sent on a dangerous mission by your government – to dive down to a sunken ship and retrieve some nuclear isotopes before anyone else while avoiding cyborg enemy agents. Not one of the most original plots in the world!

Part one of the game has graphics, starting with you sitting in your office and deals with finding a ferry to take you to the sunken ship. Part two concerns searching the sunken vessel for the nuclear material.

Balg quite enjoyed this game. Although the graphics are nothing to rave about (as with most *GAC* games), and the parser is unfriendly in places, the puzzles are well though out and cleverly implemented. These provide the main enjoyment of the game, and in part two especially they can be very devious!

This is John's first game, but definitely not his last, and although enjoyable it is let down by its poor parser and plot. John certainly knows how to write a good game and Balg looks forward to reviewing his next release *City for Ransom* soon...

Atmosphere	**49%**
Interaction	**56%**
Challenge	**66%**
AA Rating	**57%**

Clue pot

These clues are from David Owen, Jerome Young, Stuart Whyte, Tim Bell, Joan Pancott and of course Balrog himself. If you don't want any help with adventuring avert your eyes and plug your nose! Special thanks to Andrew Helsby for the *Suspect* map. If you've got any hints, tips etc, write to Balrog, Amstrad Action, 4 Queen Street, Bath BA1 1EJ.

Colour of Magic

Start of Part 1: Inventory, stand up, translate, Twoflower asks you to be his guide, yes, talk to Broadman, say show room to Twoflower, go widdershins, get saucer of milk (drop it when you find the cat), t, r, up, w to Bedroom (see Twoflower and the Luggage), t, d, h, u, out to Courtyard (Give coins to Beggar and Cripple Wa, it will help you later).

Corruption

Use your card to get into Bill's office, and break the drawer with the screwdriver.

Crystal Theft

Start: Examine katana and pistol, south, down, south, cut bush, drop katana, east, south, read markings (ROYGIV), north, get and examine cube, west, south, west three times, east, up to Basalt Pillar, drop pistol and cube, up, get and examine plastic card, down, get pistol and cube, down, east, get and examine power pack, down, get and read book (ANRRH), south, south, west, south, east, south to Cave Mouth, drop cube (needed later) and power pack (it will disappear, but has no use other than scoring 50 points), north, west twice, get and examine wire, west, east, north, get, examine and wear helmet, west, south twice, east, south, drop plastic card, south (note orange light).

Forest at the World's End

- Wear ring to enter the witch's hovel and retrieve key.
- Use rope to descend into the volcano to get the chest.

HELP!

- Alec Chapman has written to Balrog asking for help on *Mindfighter* – "I want to get in touch with the girl Helen. I've a phone book, photo, letter, file, pill and have scored 84 points after eating the pill." If anyone can help Alec then write to me and I will print the answer next month. I have included some clues for *Mindfighter* for Alec which may be applicable.
- Tim Bell sent in the *Stationfall* tips, but is stuck himself – "I can't get the safe open or find the explosive. I also have a serious food problem."
- P J White is stuck in *Jinxter* – 'I have got to the end of *Jinxter* and when Jannedor comes to the fireplace the fan falls off the wall in the kitchen and she goes away.' Can anyone help him?
- Andrew Helsby drew the *Suspect* map on p74 but has some problems – 'How do you get into the barn, and is it possible to go up the stairs?'

Mindfighter

- To destroy the ship, empty the petrol, burn the rag with the lighter, and run off the ship. After finishing your tasks in part one, go to the fence and metamorphose to fly across it.
- In the vents, the only rooms that need to be visited lie E and S.
- Look inside the medical room to find a uniform.
- Dressing like other officers will allow you to move safely through the complex.
- Take off your uniform when Jimmy's around.

Stationfall

- To get the medium drill bit you may need to delegate.
- To catch a falling star try ballooning. Beware the old flame.
- To get the coin, shoot the box.
- To get an object out of the PX you will need an ostrich to chase a stick.
- The balloon creature may be friendly to spacers, but his feeding habits are definitely not ozone-friendly!

Jewels of Babylon

- To get the spear, give the watch to the native.
- To pass the lion, give it some fish.
- Kill the octopus with the spear.
- Throw gunpowder at crocodile, light match, throw match at crocodile.
- To find the key, place plank across pit.

Panic Beneath The Sea

- Search coat
- Push book to reveal secret exit. Pull it to close exit.
- Cut the cable with the knife from the dining room.

Avon

- Kiss the statue of the woman in the chamber with white pillars.
- Eat the bread before you enter the competition in the Boar's Head.

JUST FOR LAUGHS

Come on you Balrogites! Send in your amusing responses! This month's are all thanks to Phil Jarkon of Sale...

Enchanter

- Have you used Cleesh on Krill? The adventurer? Yourself? The guards?
- Tried writing on the spell scrolls with the pencil?

Emerald Isle

- Type XYZZY.

Panic Beneath the Sea

- Type CHEAT.

BALROG'S POST

'It's great to have an adventure column back – please don't ever leave again. Thanks for the tips on *Pawn*. I couldn't get anywhere with it. Please can we have some more. *AA*'s 4th Birthday edition is fantastic – you have the best adventure column in the world.' says Julie Humphrey of Swindon. Thanks Julie! Any tips for *Pawn* will be gratefully received and Balrog is positively ecstatic with all the compliments you have given the column.

Balrog has received his first letter from a Spanish Amstrad owner, Noel Llopis, and he has some very interesting comments for the Programming with the Balrog feature 'Why not give it a new look? Instead of a programming course, it could be a tips and routines section for adventure game creators.' This is the best idea Balrog has received for the Programming series, so if you have any useful routines or pokes for any adventure writers, write in and tell me.

For example, how about a picture-loading routine for *PAW* or a syntax analyser for *GAC* to tell you which words the parser doesn't understand. Noel also says 'How can I include my own routines in *GAC*? For example IF (VERB 7) CALL &A000' I know that *PAW* supports external routines, but can any one out there write one for *GAC*?



The Lords and Ladies of Adventure

Once again three more intrepid and courageous adventurers join the ranks to give aid and comfort to you – treat them with the respect they deserve! (But don't be afraid to write!)

Don't forget that to write in offering your services to other less fortunate adventurers is a great way to make friends around the world. So if you want to reach out a helpful hand, write in today with details of the games you have finished and can offer help on.

Please remember though to enclose a SAE when writing to a Lord or Lady, otherwise they won't reply!

Adventure Quest ▪ Colossal Adventure ▪ Cricket Crazy ▪ Dungeon Adventure ▪ Dungeons Amethysts Alchemists 'n Everything ▪ Football Frenzy ▪ Heroes of Karn ▪ Knight Orc ▪ Kobyashi Naru ▪ Life Term ▪ Lords of Time ▪ Mordon's Quest ▪ Price of Magic ▪ Questprobe III ▪ Rebel Planet ▪ Redmoon ▪ Return to Eden ▪ Rigel's Revenge ▪ Scary Tales ▪ Seabase Delta ▪ Smashed ▪ Snowball ▪ Starwreck ▪ Subsunk ▪ Wizbiz & Worm in Paradise
Mr H Higgs 20 Naworth Close, Highbury Vale Estate, Bulwell, Nottingham, NG6 9EZ.

Bard's Tale ▪ Colour of Magic ▪ Dungeons Amethysts Alchemists 'n Everything ▪ Fourth Protocol ▪ Gems of Stradus ▪ Return to Eden ▪ Scary Tales & Vera Cruz Affair
William Conlon, 171 Mulvey Park, Dundrum, Dublin 14, Ireland.

Base ▪ Hollywood Hijinx ▪ Infidel ▪ Island ▪ Wishbringer & help for *PAW* programmers.
Ken Bond, 17 Adel Park Gardens, Adel, Leeds, West Yorkshire LS16 8BN. Tel (0532) 672278.



CONTACTING BALROG

Balrog is hungry for letters! So if you've just completed an adventure, found an amusing response, know of some tips for adventure creators or anything else, then write to him c/o *Amstrad Action* now!

Balrog promises that even if he doesn't like your letter he will still only eat *it* and not *you*...

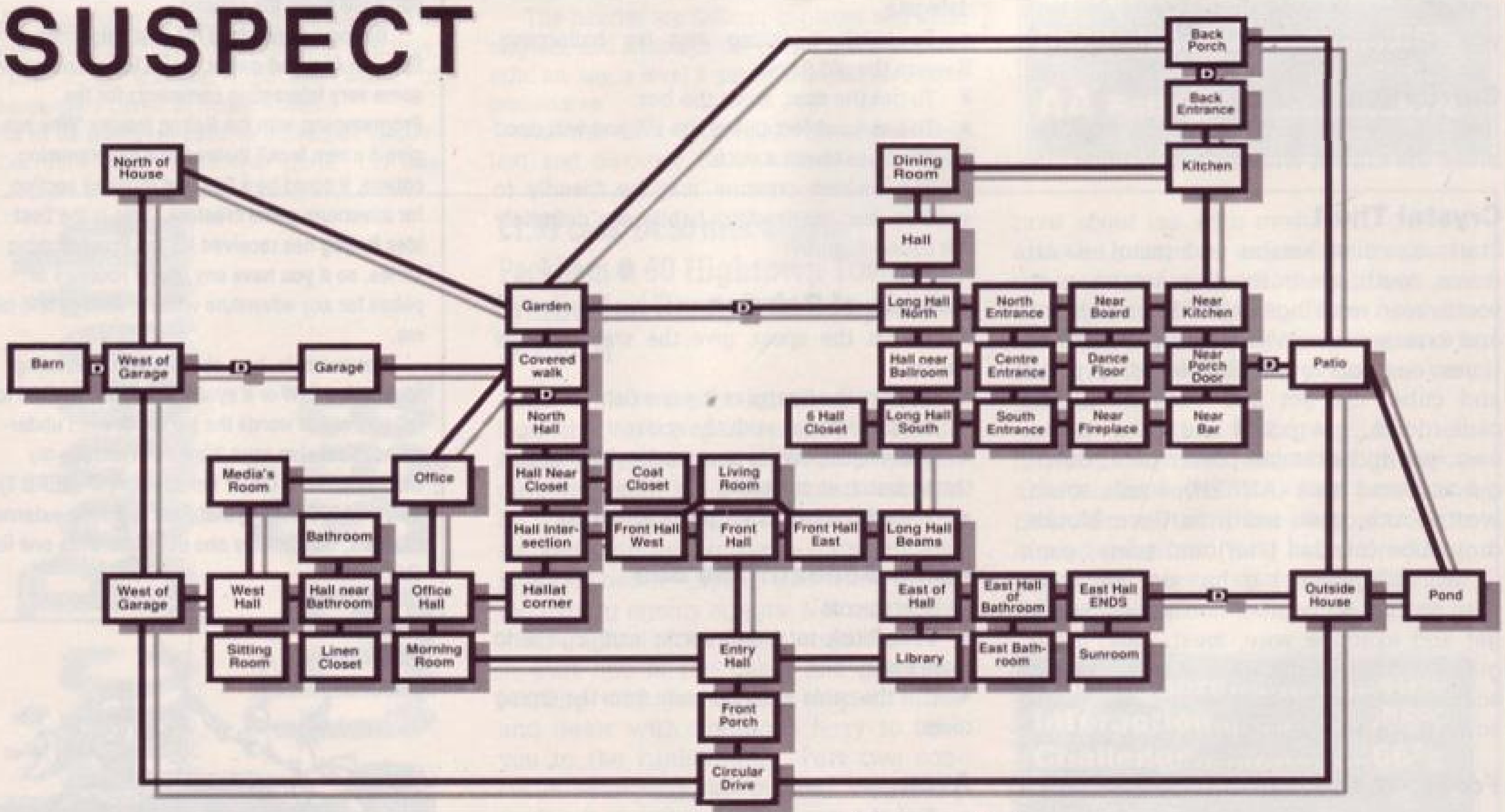
Clubbing together

Do you run an adventure club? Or are you a member of one? If so, Balrog wants to hear all about the services offered, how much (if anything) they cost, how many members there are etc. Balrog will soon be doing a round-up of all the adventure clubs out there, so write now!

Bards Tale Club

You may have seen the *Elite* Club elsewhere in *AA*, but Balrog reckons a *Bards Tale* Club is a much better idea as the game is over eight times as large (330K versus 42K) and better. So, if you want to become a Bardist, write to Balrog and joint the *real Elite*!

SUSPECT



D = Locked door, open from inside.
Near Bar = Start.
Office = Body, Bullet, Lariat.
Garage = Crowbar, Sunroom.
Library = Book.
Kitchen = Bin.
Garden = Dog will let go pass eventually.
Near Fireplace = In late stage of Game a note is

TYPE-INS

New boy ADAM WARING introduces this month's keyboard kapers

NIM II

Nim II is primarily an educational game for 5-10 year olds, but can prove to be a challenge for older players too.

The program's author, Mark Walker of Warley, describes the program as a sort of mathmatical numbers game. When the program is run a random number between 10 and 20 is displayed. This is the target number, and the player and computer take it in turns to select tiles, numbered between one and nine, attempting to get a combination of values that adds up to the target. The strategy comes in as you attempt to prevent your opponent from reaching the number, as well as trying to reach it yourself.

```
{EtBj} 10 REM ***** NIM II THE CHALLENGE *****
{FiBj} 20 REM ***** BY MARK WALKER 1989 ******
{KxAt} 30 REM ***** INITIALISE *****
{OqAp} 40 upp$=CHR$(11)
{DjAp} 50 down$=CHR$(10)
{EjAr} 60 lef$=CHR$(8)
{GmAo} 70 rig$=CHR$(9)
{IvAp} 80 bell$=CHR$(7)
{HsAu} 90 blank$="
"
{MnBq} 100 DIM choice(10),compchoice(10),number(9),think$(10)
{BkBs} 110 compcounter$="000"+down$+lef$+lef$+lef$+"000"
{DnBr} 120 playcounter$="   "+down$+lef$+lef$+lef$+"   "
{NiAo} 130 playturn=0
{DlAp} 140 compturn=0
{OmBq} 150 BORDER 0:INK 0,0:INK 1,24:PEN 1:PAPER 0:MODE 2
{IjAt} 160 REM ***** READ DATA *****
{MqAo} 170 FOR a=1 TO 10
{NrAp} 180 READ think$(a)
{LjAk} 190 NEXT a
{JvAm} 200 REM *****
{BqAo} 210 GOSUB 1820
{PkAn} 220 GOSUB 1610
{MqAn} 230 GOSUB 1720
{JoAu} 240 REM ***** PLAYER CHOICE *****
{KxAv} 250 LOCATE 20,20:PRINT blank$
{JoAt} 260 playturn=playturn+1
{PoBo} 270 LOCATE 26,20:PRINT "YOUR GO (INPUT NUMBER) ?"
{GuAx} 280 z$=INKEY$:IF z$="" THEN 280
{AqAx} 290 IF z$<"1" OR z$>"9" THEN 280
{JjAw} 300 choice(playturn)=VAL(z$)
{BsCl} 310 IF number(choice(playturn))=1 THEN SOUND
1,80,10,6:GOTO 280
{LjAp} 320 PEN 0:PAPER 1
{LsCn} 330 IF choice(playturn)=1 THEN number(1)=1:LOCATE
12,14:PRINT playcounter$
{OjCq} 340 IF choice(playturn)=2 THEN number(2)=1:LOCATE
18,14:PRINT playcounter$
{IrCo} 350 IF choice(playturn)=3 THEN number(3)=1:LOCATE
24,14:PRINT playcounter$
{OrCp} 360 IF choice(playturn)=4 THEN number(4)=1:LOCATE
30,14:PRINT playcounter$
{PuCp} 370 IF choice(playturn)=5 THEN number(5)=1:LOCATE
36,14:PRINT playcounter$
{AsCr} 380 IF choice(playturn)=6 THEN number(6)=1:LOCATE
42,14:PRINT playcounter$
{BlCq} 390 IF choice(playturn)=7 THEN number(7)=1:LOCATE
48,14:PRINT playcounter$
{HqCr} 400 IF choice(playturn)=8 THEN number(8)=1:LOCATE
54,14:PRINT playcounter$
{BvCp} 410 IF choice(playturn)=9 THEN number(9)=1:LOCATE
60,14:PRINT playcounter$
{PwAp} 420 PEN 1:PAPER 0
{BiAn} 430 GOSUB 450
{JqAn} 440 GOTO 1010
{GxBk} 450 REM ***** CHECK WHO HAS WON *****
{CiAw} 460 LOCATE 20,20:PRINT blank$
{IlAn} 470 FOR a=1 TO 4
{MqBn} 480 IF choice(a)+choice(a+1)=num THEN 720
{AmBp} 490 IF choice(a)+choice(a+2)=num THEN 720
{PxBn} 500 IF choice(a)+choice(a+3)=num THEN 720
{BwBm} 510 IF choice(1)+choice(5)=num THEN 720
{HxBt} 520 IF choice(a)+choice(a+1)+choice(a+2)=num THEN 720
{KwBu} 530 IF choice(a)+choice(a+2)+choice(a+3)=num THEN 720
{MkBu} 540 IF choice(a)+choice(a+1)+choice(a+3)=num THEN 720
{DjBs} 550 IF choice(a)+choice(a+2)+choice(a+4)=num THEN 720
{AjCl} 560 IF
choice(a+1)+choice(a+2)+choice(a+3)+choice(a+4)=num THEN 720
{PjCi} 570 IF
choice(a)+choice(a+1)+choice(a+2)+choice(a+3)=num THEN 720
{BpBt} 580 IF compchoice(a)+compchoice(a+1)=num THEN 770
{EmBr} 590 IF compchoice(a)+compchoice(a+2)=num THEN 770
{EoBs} 600 IF compchoice(a)+compchoice(a+3)=num THEN 770
{LoBs} 610 IF compchoice(1)+compchoice(5)=num THEN 770
{InBr} 620 IF compchoice(4)+compchoice(5)=num THEN 770
{PjCk} 630 IF
compchoice(a)+compchoice(a+1)+compchoice(a+2)=num THEN 770
{HpCj} 640 IF
compchoice(a)+compchoice(a+2)+compchoice(a+3)=num THEN 770
{NoCl} 650 IF
compchoice(a)+compchoice(a+1)+compchoice(a+3)=num THEN 770
{FuBx} 660 IF
compchoice(a)+compchoice(a+2)+compchoice(a+4)=num THEN 770
{OpCq} 670 IF
compchoice(a+1)+compchoice(a+2)+compchoice(a+3)+compchoice(a+4
)=num THEN 770
{IiCs} 680 IF
compchoice(a)+compchoice(a+1)+compchoice(a+2)+compchoice(a+3)=
num THEN 770
{ElAk} 690 NEXT a
{ErBk} 700 IF playturn+compturn=9 THEN 820
{MpAn} 710 RETURN
{JiAu} 720 REM ***** PLAYER WINS *****
{ApAx} 730 LOCATE 34,20:PRINT "YOU WIN!!!!"
{EsBo} 740 LOCATE 28,22:PRINT "PRESS <SP> TO CONTINUE"
{KjBi} 750 z$=INKEY$:IF z$<>" " THEN 750
{BqAl} 760 RUN
{AuBi} 770 REM ***** COMPUTER WINS *****
{MsBp} 780 LOCATE 29,20:PRINT "I WIN TOO BAD BUCKO!!!"
{OkBo} 790 LOCATE 28,22:PRINT "PRESS <SP> TO CONTINUE"
{JlAx} 800 z$=INKEY$:IF z$<>" " THEN 800
{OkAl} 810 RUN
{IvAs} 820 REM ***** A DRAW *****
{IqBi} 830 LOCATE 34,20:PRINT "IT'S A DRAW!!!"
{DxBp} 840 LOCATE 28,22:PRINT "PRESS <SP> TO CONTINUE"
{KvBi} 850 z$=INKEY$:IF z$<>" " THEN 850
{GxAk} 860 RUN
{FiBk} 870 REM ***** PRINT COMPUTER COUNTER *****
{AoAq} 880 PEN 0:PAPER 1
{MmCo} 890 IF compchoice(compturn)=1 THEN number(1)=1:LOCATE
12,14:PRINT compcounter$
{FpCs} 900 IF compchoice(compturn)=2 THEN number(2)=1:LOCATE
18,14:PRINT compcounter$
{InCo} 910 IF compchoice(compturn)=3 THEN number(3)=1:LOCATE
24,14:PRINT compcounter$
```

```
{AtCs} 920 IF compchoice(compturn)=4 THEN number(4)=1:LOCATE
30,14:PRINT compcounter$
{AmCs} 930 IF compchoice(compturn)=5 THEN number(5)=1:LOCATE
36,14:PRINT compcounter$
{DqCu} 940 IF compchoice(compturn)=6 THEN number(6)=1:LOCATE
42,14:PRINT compcounter$
{CpCq} 950 IF compchoice(compturn)=7 THEN number(7)=1:LOCATE
48,14:PRINT compcounter$
{GrCs} 960 IF compchoice(compturn)=8 THEN number(8)=1:LOCATE
54,14:PRINT compcounter$
{AlCr} 970 IF compchoice(compturn)=9 THEN number(9)=1:LOCATE
60,14:PRINT compcounter$
{HrAq} 980 PEN 1:PAPER 0
{IiAn} 990 GOSUB 450
{JvAl} 1000 GOTO 240
{HwBi} 1010 REM ***** COMPUTER CHOICE *****
{AjAx} 1020 LOCATE 20,20:PRINT blank$
{PmBl} 1030 LOCATE 32,20:PRINT think$(INT(RND(1)*10)+1)
{HuAu} 1040 compturn=compturn+1
{OkAo} 1050 FOR b=1 TO 9
{IlAn} 1060 FOR a=1 TO 4
{LvDm} 1070 IF num-(compchoice(a)+compchoice(a+1))=b AND num-
ber(b)=0 THEN compchoice(compturn)=b:GOTO 1490
{CuDn} 1080 IF num-(compchoice(a)+compchoice(a+2))=b AND num-
ber(b)=0 THEN compchoice(compturn)=b:GOTO 1490
{LtDm} 1090 IF num-(compchoice(a)+compchoice(a+3))=b AND num-
ber(b)=0 THEN compchoice(compturn)=b:GOTO 1490
{JvDl} 1100 IF num-(compchoice(1)+compchoice(5))=b AND num-
ber(b)=0 THEN compchoice(compturn)=b:GOTO 1490
{EoDw} 1110 IF num-
(compchoice(a)+compchoice(a+1)+compchoice(a+2))=b AND
number(b)=0 THEN compchoice(compturn)=b:GOTO 1490
{GxDt} 1120 IF num-
(compchoice(a)+compchoice(a+2)+compchoice(a+3))=b AND
number(b)=0 THEN compchoice(compturn)=b:GOTO 1490
{IsDv} 1130 IF num-
(compchoice(a)+compchoice(a+1)+compchoice(a+3))=b AND
number(b)=0 THEN compchoice(compturn)=b:GOTO 1490
{JlDs} 1140 IF num-
(compchoice(a)+compchoice(a+2)+compchoice(a+4))=b AND
number(b)=0 THEN compchoice(compturn)=b:GOTO 1490
{LsEk} 1150 IF num-(compchoice(a+1)+compchoice(a+2)+comp-
choice(a+3)+compchoice(a+4))=b AND number(b)=0 THEN comp-
choice(compturn)=b:GOTO 1490
{OqEl} 1160 IF num-
(compchoice(a)+compchoice(a+1)+compchoice(a+2)+compchoice(a+3)
)=b AND number(b)=0 THEN compchoice(compturn)=b:GOTO 1490
{EoAl} 1170 NEXT a
{AsAm} 1180 NEXT b
{OnAj} 1190 '
{DjAq} 1200 FOR b=1 TO 9
{PoAn} 1210 FOR a=1 TO 4
{FoCx} 1220 IF num-(choice(a)+choice(a+1))=b AND number(b)=0
THEN compchoice(compturn)=b:GOTO 1490
{GrDi} 1230 IF num-(choice(a)+choice(a+2))=b AND number(b)=0
THEN compchoice(compturn)=b:GOTO 1490
{HuDj} 1240 IF num-(choice(a)+choice(a+3))=b AND number(b)=0
THEN compchoice(compturn)=b:GOTO 1490
{JsCx} 1250 IF num-(choice(1)+choice(5))=b AND number(b)=0
THEN compchoice(compturn)=b:GOTO 1490
{HlDo} 1260 IF num-(choice(a)+choice(a+1)+choice(a+2))=b AND
number(b)=0 THEN compchoice(compturn)=b:GOTO 1490
{IqDo} 1270 IF num-(choice(a)+choice(a+2)+choice(a+3))=b AND
number(b)=0 THEN compchoice(compturn)=b:GOTO 1490
{DtDn} 1280 IF num-(choice(a)+choice(a+1)+choice(a+3))=b AND
number(b)=0 THEN compchoice(compturn)=b:GOTO 1490
{NiDn} 1290 IF num-(choice(a)+choice(a+2)+choice(a+4))=b AND
number(b)=0 THEN compchoice(compturn)=b:GOTO 1490
{HxDv} 1300 IF num-
(choice(a+1)+choice(a+2)+choice(a+3)+choice(a+4))=b AND num-
ber(b)=0 THEN compchoice(compturn)=b:GOTO 1490
{HxDv} 1300 IF num-
(choice(a+1)+choice(a+2)+choice(a+3)+choice(a+4))=b AND num-
ber(b)=0 THEN compchoice(compturn)=b:GOTO 1490
{FrDt} 1310 IF num-
(choice(a)+choice(a+1)+choice(a+2)+choice(a+3))=b AND
number(b)=0 THEN compchoice(compturn)=b:GOTO 1490
{AlAm} 1320 NEXT a
{OtAl} 1330 NEXT b
{OsAj} 1340 '
{CoAq} 1350 FOR b=1 TO 9
{HvAn} 1360 FOR a=1 TO 4
{FwCn} 1370 IF num-(compchoice(a)+compchoice(a+1))=b AND num-
ber(b)=1 THEN 1500
{IlCo} 1380 IF num-(compchoice(a)+compchoice(a+2))=b AND num-
ber(b)=1 THEN 1500
{KqCn} 1390 IF num-(compchoice(a)+compchoice(a+3))=b AND num-
ber(b)=1 THEN 1500
{EmCm} 1400 IF num-(compchoice(1)+compchoice(5))=b AND num
ber(b)=1 THEN 1500
{KlCx} 1410 IF num-
(compchoice(a)+compchoice(a+1)+compchoice(a+2))=b AND
number(b)=1 THEN 1500
{IkCt} 1420 IF num-
(compchoice(a)+compchoice(a+2)+compchoice(a+3))=b AND
number(b)=1 THEN 1500
{DlCv} 1430 IF num-
(compchoice(a)+compchoice(a+1)+compchoice(a+3))=b AND
number(b)=1 THEN 1500
{BkCt} 1440 IF num-
(compchoice(a)+compchoice(a+2)+compchoice(a+4))=b AND
number(b)=1 THEN 1500
{EmAl} 1450 NEXT a
{LwAl} 1460 NEXT b
{LoBt} 1470 IF number(compchoice(compturn))=1 THEN 1530
{DtAo} 1480 GOTO 1530
{PxAk} 1490 GOTO 870
{DwBl} 1500 REM ***** DIVIDE COMPUTER CHOICE *****
{IoBk} 1510 compchoice(compturn)=INT(b/2)
{PpAm} 1520 GOTO 1470
{JiBl} 1530 REM ***** GET THE RIGHT NUMBER *****
{GkBm} 1540 IF num<15 THEN GOSUB 1580:GOTO 1490
{ErAs} 1550 FOR b=9 TO 1 STEP-1
{KvBw} 1560 IF number(b)=0 THEN compchoice(compturn)=b:GOTO
1490
{CpAm} 1570 NEXT b
{DxAq} 1580 FOR b=1 TO 9
{BoBw} 1590 IF number(b)=0 THEN compchoice(compturn)=b:RETURN
{MuAl} 1600 NEXT b
{BjBl} 1610 REM ***** SET UP DISPLAY *****
{OvBo} 1620 LOCATE 23,6:PRINT "YOU",," THE COMPUTER"
{PsAp} 1630 PEN 0:PAPER 1
{PoBi} 1640 LOCATE 23,8:PRINT playcounter$
{DmBi} 1650 LOCATE 45,8:PRINT compcounter$
{IkAq} 1660 LOCATE 12,12
{PrAn} 1670 FOR a=1 TO 9
{MuBl} 1680 PAPER 1:PRINT a;:PAPER 0:PRINT "   ";
{BiAl} 1690 NEXT a
{NrAm} 1700 PEN 1
{KoAn} 1710 RETURN
{LqAs} 1720 REM ***** GO FIRST ? *****
{FjBq} 1730 LOCATE 24,20:PRINT "DO YOU WANT TO GO FIRST ?"
{OwBi} 1740 z$=INKEY$:IF z$="" THEN 1740
{MlAr} 1750 z$=UPPER$(z$)
{AkBi} 1760 IF z$<>"N" AND z$<>"Y" THEN 1740
{AuAq} 1770 RANDOMIZE TIME
{AlAt} 1780 num=INT(RND(1)*10)+10
{MwBv} 1790 LOCATE 34,8:PEN 0:PAPER 1:PRINT num:PEN 1:PAPER 0
{LuAv} 1800 IF z$="N" THEN 1010
{EwAm} 1810 GOTO 240
{BwAt} 1820 REM ***** TITLE *****
{InBo} 1830 topbord$=CHR$(150)+CHR$(154)+CHR$(156)
{DuBp} 1840 botbord$=CHR$(147)+CHR$(154)+CHR$(153)
{EtAs} 1850 side$=CHR$(149)
{BiBi} 1860 z$="      NIM II":GOSUB 1890
{MkCm} 1870 LOCATE 18,4:PRINT "WRITTEN & PROGRAMED BY MARK
WALKER 1989"
{LjAo} 1880 RETURN
{LwAr} 1890 FOR a=1 TO LEN(z$)
{AqAw} 1900 c=ASC(MID$(z$,a,1))-64
{KvCo} 1910 IF c+64=32 THEN FOR aa=1 TO 3:lin$(aa)=lin$(aa)+"
":NEXT aa:GOTO 1930
{CtDo} 1920 lin$(1)=lin$(1)+" "+topbord$:lin$(2)=lin$(2)+"
"+side$+CHR$(c+64)+side$:lin$(3)=lin$(3)+" "+botbord$
```

CONTRIBUTIONS

If you think your program is good enough to be be published in Type-Ins then send your program on disk or tape (not listings, we simply don't have the time to type them in) with as much documentation as possible. Every listing published will earn its author a CASH PRIZE, so get send those routines to:

Type-Ins
Amstrad Action
Fututre Publishing
4 Queen Street
Bath BA1 1EJ

● Sorry, but if you don't enclose an SAE you won't get your tape/disk back!

```
{PsAl} 1930 NEXT a
{IoBl} 1940 FOR a=1 TO 3:PRINT lin$(a):lin$(a)="":NEXT a
{LsAm} 1950 RETURN
{OmAr} 1960 REM ***** DATA *****
{AjAt} 1970 DATA "Hmmmmmm...      "
{LnAt} 1980 DATA "Hold on...      "
{CsAt} 1990 DATA "Just a second.."
{KoAs} 2000 DATA "Well now...     "
{MuAu} 2010 DATA "Thinking...     "
{GjAu} 2020 DATA "Wait a moment.."
{LvAv} 2030 DATA "Processing...   "
{IjAt} 2040 DATA "Err..Ummm...    "
{AmAt} 2050 DATA "Won't be long.."
{CvAu} 2060 DATA "Calculating... "
```

EVAL

• 464 ONLY

In response to Shabaz Yousaf's request for an EVAL command (*Forum AA*50), Seg Gorham from Wakefield has submitted a routine to serve that very purpose. The BASIC listing generates an RSX that's relocatable anywhere in the central 32K. Syntax is simple, if you wanted to evaluate the expression x=x+1:

```
a$="x=x+1":|EVAL,@a$
```

Since the routine makes several calls directly to the BASIC interpreter in the upper ROM (tut tut), it will only work on CPC464 machines.

```
{EkAn} 10 ' CPC 464 EVAL
{PjAt} 20 ' For Amstrad Action
{GnAq} 30 ' by Seg Gorham
{DsAo} 40 ' Oct 1989
{BkAl} 50 MODE 1
{KqBk} 60 PRINT"At what address would you like to"
{IuAt} 70 PRINT"install the RSX";
{BjAn} 80 INPUT addr
{KwAp} 90 MEMORY addr-1
{NoBi} 100 PRINT:PRINT "Installing code"
{IiAn} 110 x=addr
{PqAo} 120 FOR i=1 TO 11
{NrAm} 130 sum=0
{NnAp} 140 FOR j=1 TO 10
{DrAm} 150 READ a$
{CtAq} 160 a=VAL("&"+a$)
{CmAo} 170 POKE x,a
{InAm} 180 x=x+1
{LiAp} 190 sum=sum+a
{BxAk} 200 NEXT
{OkAq} 210 READ checksum
{MsCi} 220 IF sum<>checksum THEN PRINT"Error in DATA at
line";990+10*i:END
{GqAk} 230 NEXT
{BkBj} 240 a=addr+9:b=addr+1:GOSUB 310
{IsAw} 250 a=addr+13:b=addr+4:GOSUB 310
{GtBj} 260 a=addr+18:b=addr+13:GOSUB 310
{OmBk} 270 a=addr+23:b=addr+16:GOSUB 310
{LiAn} 280 CALL addr
{AtAp} 290 PRINT"Finished"
{NiAk} 300 END
{DpBi} 310 h=INT(a/256):l=a-(256*h)
{DqAs} 320 POKE b,l:POKE b+1,h
{CpAn} 330 RETURN
{BsBl} 1000 DATA 21,00,00,01,00,00,c3,d1,bc,00,626
{BuBj} 1010 DATA 00,00,00,00,00,c3,00,00,45,56,350
{JnBo} 1020 DATA 41,cc,00,3d,c0,eb,46,23,5e,23,991
{CxBl} 1030 DATA 56,21,a4,ac,e5,1a,77,13,23,10,899
{CtBm} 1040 DATA fa,36,00,cd,00,b9,e1,cd,4e,c3,1397
{JsBk} 1050 DATA cd,bc,e6,d8,cd,bb,de,cd,53,c4,1937
{CuBm} 1060 DATA 2b,cd,3f,dd,c4,ab,dd,7e,fe,01,1501
{HjBm} 1070 DATA 28,f5,d0,23,7e,23,b6,23,c0,cd,1303
{EkBq} 1080 DATA d6,dd,30,0e,cd,ab,cb,3a,b1,ad,1484
{DvBn} 1090 DATA b7,c0,cd,98,d2,cd,a1,d2,cd,cb,1926
{JiAx} 1100 DATA dd,c9,00,00,00,00,00,00,00,00,422
```

WAVY

• DMP2000 PRINTERS

David Hooper of Stockport has sent in this wavy-printing shortie for owners of the Amstrad DMP2000 series of printers. The message to be printed should be stored in the variable a$.

```
{AmAw} 10 REM WAVEYPRINT. By David Hooper
{PnAj} 20 DEG
{DtAm} 30 PRINT#8
{NoBi} 40 PRINT #8,CHR$(27);"3";CHR$(1)
{GqAm} 50 GOTO 120
{KvAq} 60 FOR u=1 TO LEN(a$)
{OxAx} 70 PRINT #8,TAB(u);MID$(a$,u,1);
{FwCx} 80 IF p>0 THEN PRINT #8,CHR$(27);"3";CHR$(5*p) ELSE
PRINT #8,CHR$(27);"j";CHR$(ABS(5*p));
{FkAp} 90 p=SIN(u*10)
{ClAl} 100 NEXT u
{HtAn} 110 RETURN
{CuCq} 120 a$="This is an example of a wavey message using
this little progette! AA is brill!"
{HvAm} 130 GOSUB 60
```

SUPERBASIC

Norfolk's George McIntosh has written *SuperBASIC*, a programmers' toolbox written in machine code for use in BASIC. It includes many of the commands missing from the 464. To use the commands, simply type the "|" symbol (located two keys to the left of the [ENTER] key, using shift and the "@" key), then type the command name and the required parameters, if any. For example, to emulate the 6128's GRAPHICS PEN 1, type:

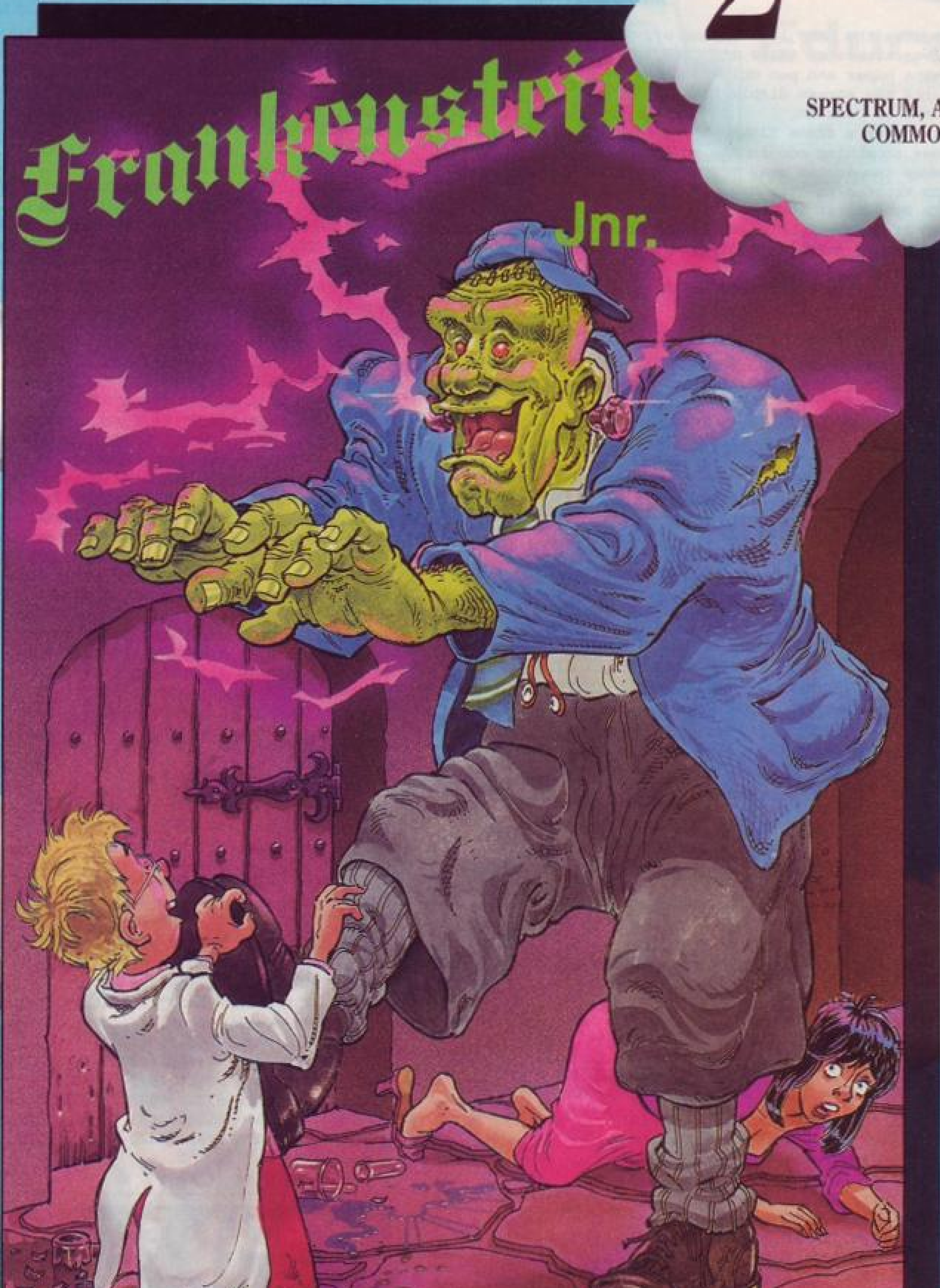
```
|GPEN,1
```

Here's a list of all the RSX commands avaliable, along with an explanation of what they do...

```
|HIGH    Selects the high screen memory, located at &C000
|LOW     Selects the low screen memory, located at &4000
|OR      OR's the current screen against &ff
|AND     AND's the current screen against &ff
|XOR     XOR's the current screen against &ff
|MON     Turns on the cassette motor
|MOFF    Turns it back off again
|ZZZ[,x] Waits until the specified character is typed,or until
         any key is pressed, if none are specified
|LEFT    }
|RIGHT   }   }    These scroll the screen one unit in the
                  specified
|UP      }   }    direction. One unit is about 4 pixels
|DOWN    }
|LIST    Lists all the SUPERBASIC  RSX's avaliable
|RON,x   Turns on the repeat function for the specified key
|RON,x   Turns it off again
|GET,@x% Returns the ASCII Value at the current cursor loca
         tion into the variable specified. The variable must
         be defined by using "x%=0", and the "@" symbol MUST
         be used.
|GWINDOW,l,r,t,b  Defines a graffix window.
|GPEN,x  Sets graffix pen
|GPPAPER,x        Sets graffix paper
|SHIFT   Toggles the SHIFT LOCK on and off
```

£2·99 *"Look out for great new games in the Cartoon Time range from CodeMasters"*

SPECTRUM, AMSTRAD CPC,
COMMODORE 64



No. 1

COLLECTOR'S EDITION

FRANKENSTEIN JNR.
Take control of The Monster in this hilarious Cartoon Adventure.
All Cartoon Time Games feature special Cartoon
Characters, some you will already know, others
like FRANKENSTEIN JNR. are new to the World of computer games.
The Cartoon Time games are a Collector's Series,
each with its own unique number. Look out for the
great Prizes from Character T-Shirts to Trips to DisneyWorld!

CARTOON TIME

```
|CAPS     Toggles the CAPS LOCK on and off
|ASK      Gives states of SHIFT and CAPS locks
|INVERT   Swaps paper and pen colours
|SCROFF   Turns the screen display off
|SCRON    Turns it back on
|FRAME    Waits for a frame flyback
|UNSC     Does something odd to the screen
|FADE     Fades the screen away
{EvBi} 1 REM Written in "The Grooveyard"
{MmAu} 2 REM By a total lunatic DJ
{ExEn} 3 REM If U cant B bothered 2 type this in,send me your
Name and Add, and 2 quid,and I'll send u this-and maybe some
more stuff-on tape!
{JuAw} 10 REM Superbasic--the '89 REMIX
{FqAv} 20 REM By George H. McIntosh
{AtAo} 30 REM So there!
{PsAk} 40 CLS
{HxBp} 50 PRINT"Welcome To Superbasic--The '89 REMIX!"
{NmDm} 60 PRINT"I shall now mix all the data down from  TWO-
TRAK DATA onto ONE TRAK RAM via a HEX DATA MIXER..."
{BrBk} 70 PRINT"Ready,engineer...LETS GO!"
{NsAn} 80 add=&8000
{LoAm} 90 LIN=370
{MrAq} 100 WHILE a$<>"TOTAL"
{FjAo} 110 READ A$
{CxAw} 120 IF a$="TOTAL" THEN 260
{HjAm} 130 CHK=0
{BwAt} 140 FOR B=1 TO 22 STEP 2
{OlAr} 150 BYTE$=MID$(A$,B,2)
{IiAs} 160 BYTE=VAL("&"+BYTE$)
{FjAp} 170 CHK=CHK+BYTE
{HiAp} 180 POKE ADD,BYTE
{MkAl} 190 ADD=ADD+1
{BxAk} 200 NEXT
{CqAo} 210 READ CHK$
{NtBw} 220 IF VAL("&"+CHK$)<>CHK THEN PRINT"ERROR IN LINE
";LIN:LIST
{DxAs} 230 CHECK=CHECK+CHK
{LqAn} 240 LIN=LIN+10
{AsAk} 250 WEND
{EnAr} 260 READ CHECKSUM$
{DwBv} 270 IF VAL(CHECKSUM$)<>CHECK THEN PRINT"CHECKSUM
ERROR":END
{NrBt} 280 PRINT"MIXDOWN COMPLETE--PLAY BACK THE MASTER..."
{GsAo} 290 CALL &8000
{AwAm} 300 |LIST
{LjCl} 310 CLS:PRINT"PRESS B FOR BASIC, OR S TO SAVE AS A
BINARY FILE..."
{EvBo} 320 IF INKEY(54)>-1 THEN CLS:|COPYRIGHT:END
{HsCj} 330 IF INKEY(60)>-1 THEN
SAVE"!SBAS.BIN",B,&8000,&400:GOTO 310
{NsBl} 340 IF INKEY(62)>-1 THEN CAT:GOTO 310
{CiAn} 350 GOTO 320
{IqAl} 360 END
{BlBl} 370 DATA FD210583CDF88221108001,49F
{JwAw} 380 DATA 1680C3D1BC000000001880,37E
{JoBk} 390 DATA 6F80C3EA80C3F080C3F680,788
{BtBi} 400 DATA C30D81C32481C33B81C33F,53A
{DmAx} 410 DATA 81C34381C35481C35D81C3,604
{OrAv} 420 DATA 6681C36C81C37281C39881,629
{OiBi} 430 DATA C3A081C3A881C3B381C3D1,75B
{OsAx} 440 DATA 81C3D781C3DD81C3F181C3,7B5
{KiAv} 450 DATA 0582C34382C36A82C37682,579
{LoAw} 460 DATA C38382C38782C39D82C3C6,6FF
{EqAv} 470 DATA 82484947C84C4FD74FD241,4F6
{DoBl} 480 DATA 4EC4584FD24D4FCE4D4F46,4D7
{KlBk} 490 DATA C65A5ADA4C4546D4524947,4E1
{AqAx} 500 DATA 48D455D0444F57CE4C4953,4E1
{DoAx} 510 DATA D4524FCE524F46C64745D4,550
{KoAx} 520 DATA 4757494E444FD7475045CE,449
{MlBk} 530 DATA 4750415045D253484946D4,43D
{AoBi} 540 DATA 434150D34153CB494E5645,438
{CwBj} 550 DATA 52D45343524F46C6534352,451
{PsAw} 560 DATA 4FCE4652414DC5554E53C3,4C1
{FmAx} 570 DATA 464144C5434F5059524947,3AD
{GsBj} 580 DATA 48D400C03E40C308BCC03E,4DF
{LkAx} 590 DATA C0C308BCC02100C0010040,429
{NtAx} 600 DATA 0AB67723037CFEFF20F67D,569
{LlBi} 610 DATA FEFF20F1C9C02100C00100,579
{PmBj} 620 DATA 400AA67723037CFEFF20F6,51C
{MvBj} 630 DATA 7DFEFF20F1C9C02100C001,5F6
{GqBj} 640 DATA 00400AAE7723037CFEFF20,42E
{PkBj} 650 DATA F67DFEFF20F1C9C0C36EBC,7F7
{CsAw} 660 DATA C0C371BCFE01200ADD4600,4FC
{HsAv} 670 DATA CD18BBB820FAC9C318BBC0,691
{AjBi} 680 DATA CD0BBC2BCD05BCC9C0CD0B,5AE
{IpAw} 690 DATA BC23CD05BCC9C00601C34D,50D
{NjAx} 700 DATA BCC00600C34DBCC0216F80,51E
{PtBk} 710 DATA 7EFE00C8FE803814D680CD,631
{ItAw} 720 DATA 5ABB3E0DCD5ABB3E0ACD5A,4B1
{PqAx} 730 DATA BBCD18BB1803CD5ABB2318,493
{AvAx} 740 DATA DEDD7E0006FFC339BBDD7E,650
{LrBi} 750 DATA 000600C339BBCD60BBDD66,4E8
{PsAu} 760 DATA 01DD6E0077C9DD5E00DD56,4FA
{JwAw} 770 DATA 01DD6E02DD6603CDCFBBDD,5C8
{DpBj} 780 DATA 5E04DD5605DD6E06DD6607,435
{GlAx} 790 DATA C3D2BBDD7E00C3DEBBDD7E,762
{JlAv} 800 DATA 00C3E4BBC03AE7B4FE0028,61D
{AvBj} 810 DATA 063E0032E7B4C93EFF32E7,530
{GnAv} 820 DATA B4C9C03AE8B4FE0028063E,57D
{JoAw} 830 DATA 0032E8B4C93EFF32E8B4C9,66B
{HmAx} 840 DATA C0CD21BB7CFE002807FD21,530
{PxBi} 850 DATA 2482CDF882CD21BB7DFE00,611
{JpBj} 860 DATA C8FD213382CDF882C92043,60E
{GjAx} 870 DATA 617073206C6F636B206F6E,40A
{CwBi} 880 DATA 200020536869667420 6C6F,339
{AmBi} 890 DATA 636B206F6E2000C02100C0,38C
{BrBk} 900 DATA 3A8FB2477EA877237CFEFF,5FB
{OxAx} 910 DATA 20F37DFEFF20EEDD21F8B2,743
{IqAw} 920 DATA DD7E00DD4601DD7000DD77,520
{AvAw} 930 DATA 01C906BC0E41ED490100BD,3CF
{JkBk} 940 DATA ED49C906BC0E41ED4906BD,509
{IwAx} 950 DATA 0E28ED49C9CD19BDC93E00,4DF
{AsAx} 960 DATA CD19BD06BC0E41ED4906BD,4AD
{LsBj} 970 DATA 4FED493CFE2920EDC91EFE,5DA
{HuBj} 980 DATA 2100C07BA677237DB420F8,4E5
{IiBj} 990 DATA CB1338F1C9FE03C8DD4600,5BC
{NoAv} 1000 DATA DD23DD23DD5E00DD5601DD,54C
{IrBj} 1010 DATA 6E02DD6603C9FD211483CD,501
{KlBk} 1020 DATA F882C9F506024F1F1F1F1F,40B
{ArBj} 1030 DATA E60FFE0A3007C630CD5ABB,50C
{HoBj} 1040 DATA 1805C637CD5ABB7910EBF1,561
{BxAx} 1050 DATA C9F57CCDCE827DCDCE82F1,7E2
{EoBi} 1060 DATA C9FD7E00FE00C8CD5ABBFD,6E9
{ApBk} 1070 DATA 2318F353555504552424153,393
{EsBj} 1080 DATA 49432056312E330D0AA447,296
{LpBj} 1090 DATA 656F72676520482E204D63,378
{JvBi} 1100 DATA 496E746F7368282A292031,341
{DmBk} 1110 DATA 3938390D0A546869732069,2E2
{GtAx} 1120 DATA 73205355504552424153 49,341
{DiAw} 1130 DATA 432056312E340D0A416E64,276
{FxBj} 1140 DATA 2069736E27742069732053,374
{NsAx} 1150 DATA 555045522C424153494341,30B
{OrBj} 1160 DATA 4C4C59210D0A5772697474,343
{IiBj} 1170 DATA 656E206F6E204D4158414D,364
{IiAu} 1180 DATA 20524F4D20627920612063,30D
{CkBl} 1190 DATA 6F6D706C657465206C756E,465
{JnBm} 1200 DATA 61746963282A290D0A2041,294
{DvBj} 1210 DATA 6E642074686520686 56C70,3FC
{CqBi} 1220 DATA 206F66206C6F6164736163,3EC
{DlAx} 1230 DATA 6F666665 6520284E657363,3D6
{KrBj} 1240 DATA 6166652920616E64206D79,3AE
{MnBj} 1250 DATA 20486F757365204D757369,3E2
{ElAx} 1260 DATA 632107007361636F666665,362
{GxBj} 1270 DATA 6520284E65736361666529,38B
{NpBk} 1280 DATA 20616E64206D7920486F75,3A5
{NmAp} 1290 DATA TOTAL
{DnAp} 1300 DATA  114980   ●
```

TYPE-IN TYPOS

Whoops! It seems that a few errors crept into these pages last month, judging from the furious letters directed at yours truly. All programs are fully tested on both the 464 and 6128 before inclusion in *Type-Ins*, but unfortunatly after these pages have left my capable hands they have to endure two terrifying processes before appearing in print.

Firstly our editor, Rod 'Slasher' Lawton casts a scrutinising eye over my copy, hunting down spelling errors (*they don't need hunting – ed*)and laying the text down on a page. *Fracland* wouldn't quite fit, so some REM statements were removed to save space. This is why some GOTOs came out pointing at non-existent addresses.

Secondly, it's off to the art department, where art editor Ollie puts in the pretty boxes, and any text that stands in his way knows the meaning of fear. This is where the ends of programs can get lost, obscured by the artistic additions. A system does exist to prevent this happening, the inclusion of bullets (●) at the end of each listing, but with me being green (and enviromentally friendly!), I forgot to put them on. A program which suffered from this was the *Fireworks* listing. Line 100 should be added to read:

```
100 NEXT:GOTO 50
```

A couple of 'I's appeared at the end of the last line on two listings. These should be ignored. Apart from that, no...er...problems at all...

25% or more off all non-budget software RRP

1st Choice for fast friendly service

EDUCATION

	Tape	Disc
Answer Back Quiz (6-11)	7.45	10.45
Fact Files for above		
20th Cent. Hist.(12+)	3.70	6.70
Arithmetic (6-11)	3.70	6.70
Ass. Football (12+)	3.70	6.70
English Words (12+)	3.70	6.70
First Aid (12+)	3.70	6.70
Gen. Knowledge (12+)	3.70	6.70
Gen. Science (14+)	3.70	6.70
Nat. History (10+)	3.70	6.70
Spelling (6-11)	3.70	6.70
Sport (14+)	3.70	6.70
Super Sport (14+)	3.70	6.70
Better Maths (12-16)	8.20	12.70
Better Spelling (9-14)	8.20	12.70
Biology (12-16)	8.20	12.70
Chemistry (12-16)	8.20	12.70
Chemistry GCSE	10.95	14.95
French Mistress (A+B)	12.70	14.95
Fun School (2-5)	4.45	6.70
Fun School (5-8)	4.45	6.70
Fun School (8-12)	4.45	6.70
Fun School 2 (Under 6)	7.45	9.70
Fun School 2 (6-8)	7.45	9.70
Fun School 2 (Over 8)	7.45	9.70
Geog. Map Quiz (9+)	8.20	12.70
German Master (A+B)	12.70	14.95
Happy Letters (3-6)	7.45	10.95
Happy Numbers (3-5)	7.45	10.95
Happy Writing (3-6)	7.45	10.95
Magic Maths (4-8)	8.20	12.70
Map Rally (7-13)	7.45	10.95
Maths Mania (8-12)	8.20	12.70
Maxi Maths (9-14)	8.20	12.70
Osprey (8-14	8.95	12.90
Physics (12-16)	8.20	12.70
Physics GCSE	10.95	14.95
Timeman One (4-9)	7.45	10.95
Timeman Two (4-10)	7.45	10.95
Weather/Climate (12+)	8.20	12.70
Word Hang (5+)	7.45	10.95
World Wise (7+)	7.45	10.95

LEISURE & SPORT

	Tape	Disc
All New Blockbusters	5.95	9.70
Beach Volley	7.45	-
Bobs Full House	5.95	-
Bridge Player 3	9.70	11.95
Colossus Bridge	8.95	10.95
Colossus Chess 4	7.45	10.95
Cricket Master	6.70	-
E. Hughes Int. Soccer	7.45	10.95
Game Set and Match	9.70	13.45
Game Set and Match 2	9.70	13.45
G. Lineker Sup. Skills	7.45	10.95
G. Lineker Hot Shots	7.45	10.95
Gazza's Super Soccer	7.45	10.95
Gold Silver Bronze	10.95	18.70
Kenny Dalglish	7.45	-
Kick Off	7.45	10.95
Krypton Factor	5.95	9.70
Liverpool	7.45	10.95
Match Day 2	6.70	10.95
Microprose Soccer	10.95	14.95
Monopoly	7.45	10.95
Passing Shot	7.45	10.95
Peter Beardsley	6.70	10.95
Quarter Back	7.45	10.95
Scrabble	7.45	10.95
Scruples	7.45	10.95
Sporting Triangles	7.45	10.95
Treble Champions	7.45	10.45
Trivia	5.20	-
Triv. Pursuit New Beg.	10.95	14.95
Triv. Pursuit Genus	10.95	14.95
Triv. Pursuit Young	10.95	14.95
Wec le Mans	7.45	10.95

BUSINESS

	Tape	Disc
Mastercalc 128 (6128)	-	24.70
Masterfile 3	-	29.95
Matrix Spreadsheet	-	34.95
Maxam	14.95	19.95
Mini Office (Budget)	2.99	4.99
Mini Office 2	10.95	14.95
Protext	14.95	19.95
Tasword (464 or 6128)	18.70	22.45
Tascopy	8.95	10.95
Tassign	-	22.45

ARCADE

	Tape	Disc
1943	7.45	10.95
4 X 4 Off Road Racing	7.45	10.95
After Burner	7.45	10.95
Arcade Muscle	9.70	13.45
A.P.B.	7.45	10.95
Barbarian 2	7.45	10.95
Batman Caped crus.	7.45	10.95
Batman The Movie	7.45	10.95
Bloodwych	7.45	-
Cabal	7.45	-
Command Perf	9.70	14.95
Crazy Cars 2	7.45	10.95
Cybernoid 2	7.45	10.95
Dark Force	9.70	13.45
Dark Fusion	7.45	10.95
Dominator	7.45	10.95
Dragon Ninja	7.45	10.95
Dragon Spirit	7.45	10.95
Driller	10.95	13.45
Eliminator	7.45	10.95
F15 Strike Eagle	7.45	10.95
Forgotten Worlds	7.45	10.95
F. Bruno's Big Box	9.70	13.45
Gemini Wing	7.45	10.95
Giants	9.70	14.95
Gilbert	7.45	10.95
In Crowd	14.95	-
Indian Jones	7.45	10.95
Konami Arcade Coll.	7.45	13.45
Laser Squad	7.45	10.95
Licence To Kill	7.45	10.95
Magnificent 7	7.45	13.45
Marauder	7.45	10.95
Navy Moves	7.45	10.95
Netherworlds	7.45	10.95
New Zealand Story	7.45	10.95
Obliterator	7.45	-
Operation Wolf	7.45	10.95
Pacland	7.45	10.95
Pacmania	6.70	10.95
Paranoia Complex	7.45	10.95
Purple Saturn Day	10.95	14.95
Rally Cross	7.45	10.95
Real Ghostbusters	7.45	10.95
Red Heat	7.45	10.95
Renegade 3	7.45	10.95
Rick Dangerous	7.45	10.95
Robocop	7.45	10.95
Rock Star	7.45	10.95
Running Man	7.45	10.95
Run The Gauntlet	7.45	10.95
Samurai Warrior	6.70	10.95
Shinobi	7.45	10.95
Silk Worm	7.45	10.95
Skweek	7.45	10.95
Special Action	9.70	13.45
Star Wars	7.45	10.95
Storm Lord	7.45	10.95
Story So Far Vol. 2	9.70	10.95
Strider	7.45	10.95
Superman	7.45	10.95
Taito Coin Op. Hits	9.70	-
Tank Attack	9.70	10.95
Thunderbirds	7.45	10.95
Thunder Blade	7.45	10.95
Time Scanner	7.45	10.95
Vigilante	7.45	10.95
Xenon	7.45	10.95
Xybots	7.45	10.95

BUDGET

	Tape	Disc
Choice Cheats 1	2.99	4.99
Choice Cheats 2	2.99	4.99
Choice Cheats 3	2.99	4.99
Action Force	2.99	
Arcade Flight Sim.	2.99	
Army Moves	2.99	
B. McGuigans Boxing	2.99	
Batman (3D)	2.99	
Batty	2.99	
Big Foot	2.99	
Blade Warrior	2.99	
Crazy Cars	2.99	
D. Thompson Decath	2.99	
Dizzy	2.99	
Enduro Racer	2.99	
Fast Food	2.99	
Football Manager	2.99	
Footballer of the Year	2.99	
Gauntlet	2.99	
Gauntlet 2	2.99	
Green Beret	2.99	
Leaderboard	2.99	
Knight Games	2.99	
Masters of the Universe	2.99	
Match Point	2.99	
Mig 29	2.99	
Mini Office	2.99	4.99
Monte Carlo Casino	2.99	
Moto Cross Simulator	2.99	
Nick Faldo	2.99	
Ninja Command	2.99	
Ninja Massacre	2.99	
Power Boat Simulator	2.99	
Pro Golf	2.99	
Rambo	2.99	
Rugby Simulator	2.99	
SAS Combat	2.99	
Stallone Cobra	2.99	
Street Gang Football	2.99	
Task Force	2.99	
Tennis	2.99	
The Hit Squad	2.99	
Treasure Island Dizzy	2.99	
Twin Turbo V8	2.99	
Wizball	2.99	
Wolf Pack	2.99	
World Series Baseball	2.99	
Yie Ar Kung Fu	2.99	
Zorro	2.99	
Air Wolf	1.99	
A View to a Kill	1.99	
Battleships	1.99	
Bomb Jack	1.99	
Bomb Jack 2	1.99	
Cricket Inter.	1.99	
Danger Mouse - Trouble	1.99	
Danger Mouse - Whoopee	1.99	
Dynamite Dan	1.99	
Dun Darach	1.99	
Formula 1 Grand Prix	1.99	
G. Gooch Match Cricket	1.99	
Gun Boat	1.99	
Joe Blade 2	1.99	
Master Chess	1.99	
Mind Trap	1.99	
Mission Omega	1.99	
Pool	1.99	
Postman Pat	1.99	
Red Scorpion	1.99	
Rocky Horror Show	1.99	
Shanghai Warriors	1.99	
Steve Davis Snooker	1.99	
Storm Warrior	1.99	
Super Nudge 2000	1.99	
Thing	1.99	
Trap Door	1.99	
Xeno	1.99	
Yabba Dabba Doo	1.99	
Yogi Bear	1.99	

ADVENTURE

	Tape	Disc
Corruption (6128 only)	-	14.95
Game Over 2	6.70	9.70
Lancelot	10.95	14.95
Time and Magic	10.95	10.95
Times of Lore	7.45	10.95
Tolkien Trillogy	9.70	13.45
Total Eclipse	7.45	10.95
Total Eclipse 2	8.40	-

A MERRY CHRISTMAS
To All Our Customers

DR. WHO AND THE MINES OF TERROR

Smartly packaged arcade adventure with Briefing Documents, Mine Blue Print, Secret Instructions, etc.

SPECIAL CHRISTMAS OFFER
TAPE Only £3.95

BLANK DISCS
Maxell CF2 3" discs
£2.50 each
£11.95 for 5
£23.50 for 10

EARLY CHRISTMAS SHOPPING
Get a £1 voucher for every £15 spent in November.

JOYSTICKS
Quickshot 2 Turbo £6.45
Megablaster £8.95
Cruiser (Black or Blue) £9.95

Seal 'n Type
Keyboard protectors
State 464 or 6128
Only £8.95

BUDGET BARGAIN
Save over a £1
3 @ £1.99
or
2 @ £2.99
only **£4.95**

RIBBON REFRESH
Printer Ribbon Restorer
Only £7.95

Tape £2.99 **CHEAT** **Disc £4.99**

Bend the rules! Play your games to the end with the aid of cheats such as infinite weapons and immunity.

CHOICE CHEATS 1
Cheats for: By Fair Means or Foul, Cybernoid, Karnov, Operation Wolf, Flying Shark, Radius, Tanium, Advanced Pinball Simulator, Joe Blade 2, Star Trooper, Reflex and Shanghi Karate.

CHOICE CHEATS 2
Cheats for: Dragon Ninja, Hopper Copper, Arkanoid, Arkanoid 2, Dynamite Dan, Soloman's Key, Dizzy 2, ATV Simulator, Empire Strikes Back, Pro Ski Simulator, Batman and Head Over Heels.

NEW CHOICE CHEATS 3 NEW
Cheats for: After Burner, Big Foot, The Hit Squad, Robocop, Skweek, Storm Lord, Thunderbirds, Thunder Blade, Titan, Twin Turbo V8, Yabba Dabba Doo and Yogi Bear.

Many more items in stock than listed phone us for DISCOUNT PRICES

To order fill in the coupon and send it with a cheque or postal order to

1st Choice Software Ltd
Dept AA12
4 Paul Row, Temple Lane
Littleborough, Lancs, OL15 9QG

All prices are inclusive of VAT and P & P in the UK

PHONE 0706 72728

title | Disc/Cass | Price | Name | Address | Postcode | Total price

CHEAT MODE

Thunderbirds are go! with another FAB crop of tips

You can't keep a good game down, and we've been flooded with solutions to Grandslam's *Thunderbirds*. We've compiled the best of them all and let our *AA* cartographer loose on them. These excellent and indispensible maps to the *Mine Menace* and *Sub Crash* are the result. So you can go International Rescuing with renewed vigour. This is Thunderbird Six 'Over and Out'



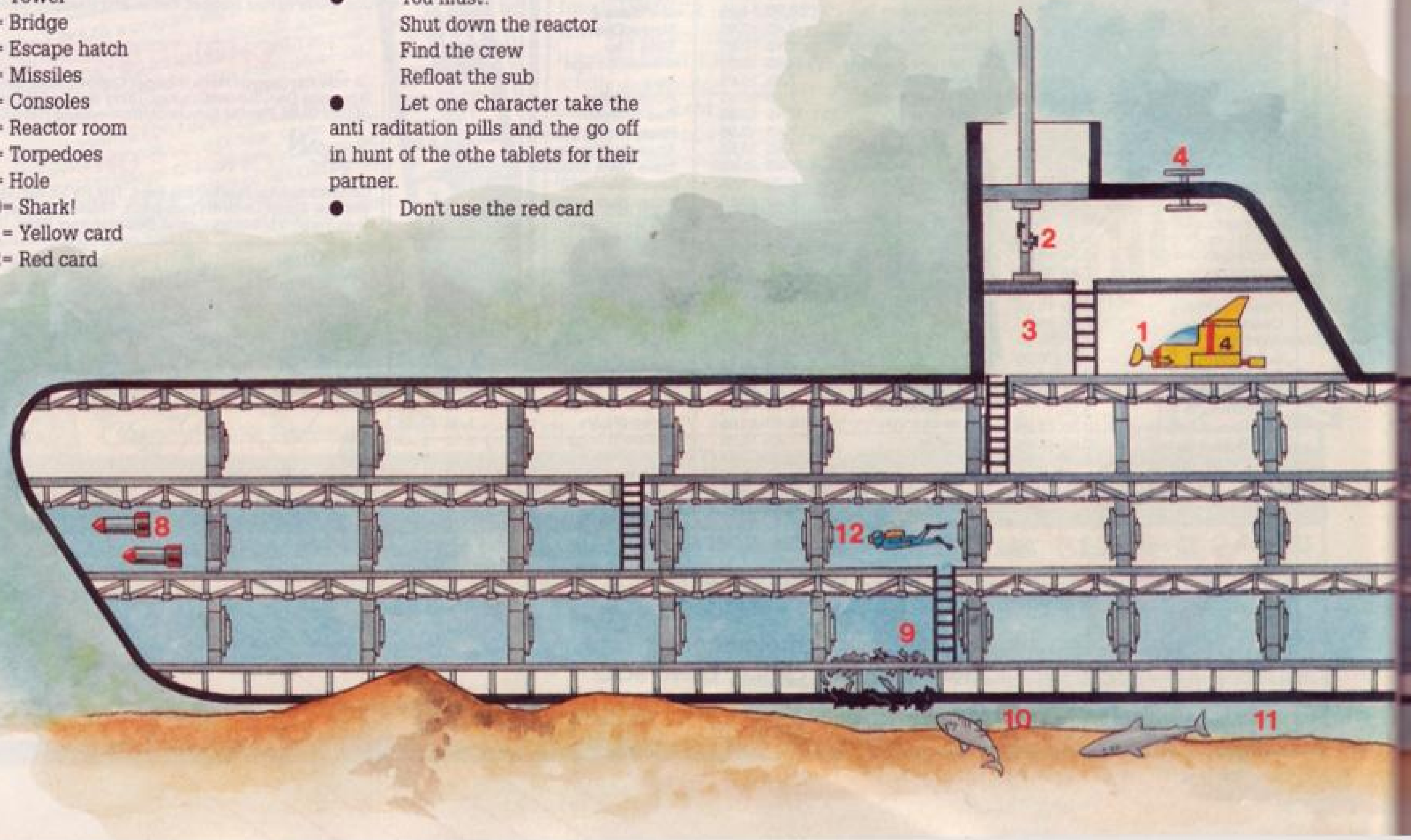
KEY

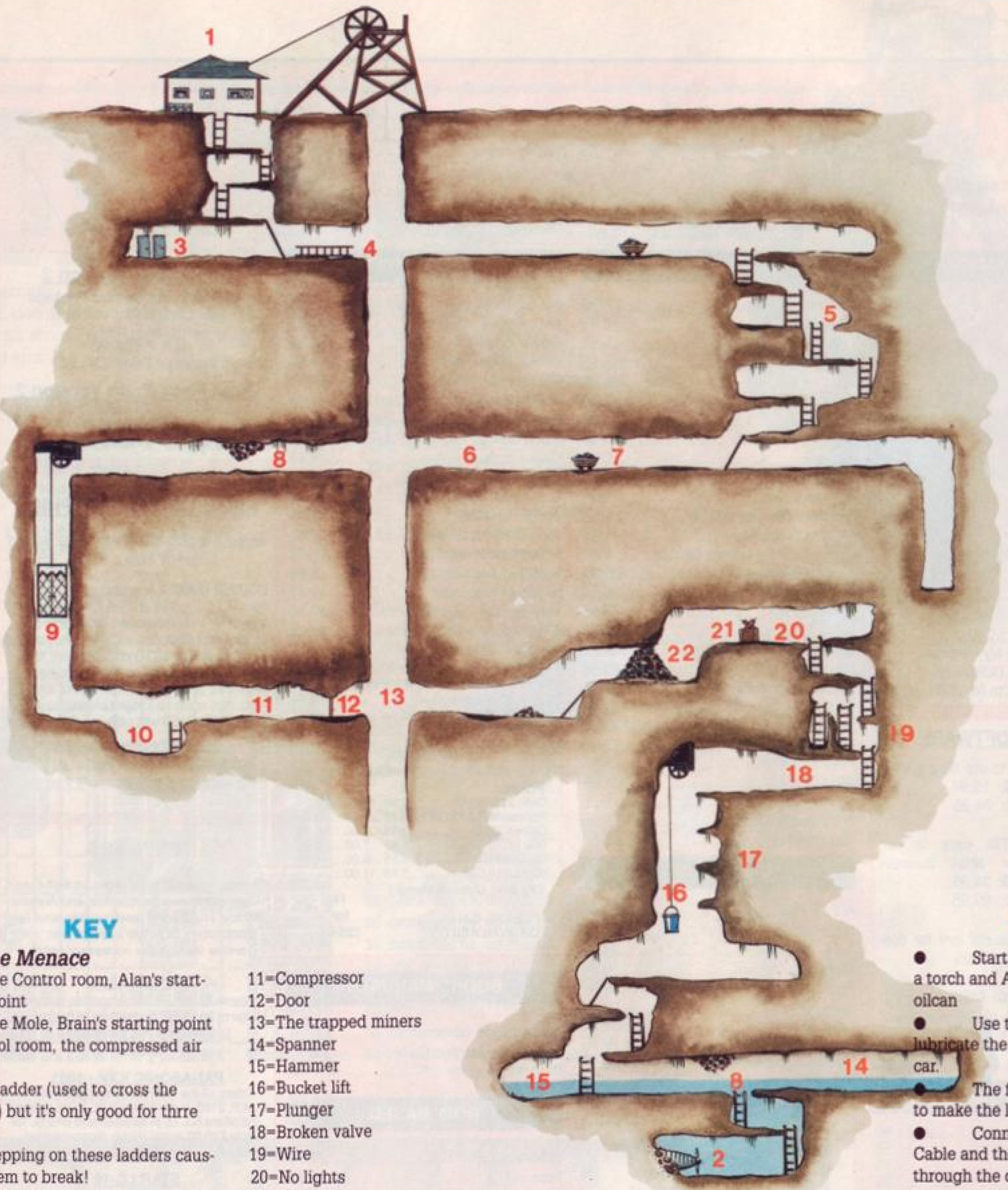
Sub Crash:

1=Thunderbird Four, starting point.
2= Tower
3= Bridge
4= Escape hatch
5= Missiles
6= Consoles
7= Reactor room
8= Torpedoes
9= Hole
10= Shark!
11= Yellow card
12= Red card

TIPS

- Both characters must have an aqualung, one anti-radition pills, the other shark repellant.
- You must:
  Shut down the reactor
  Find the crew
  Refloat the sub
- Let one character take the anti raditation pills and the go off in hunt of the othe tablets for their partner.
- Don't use the red card





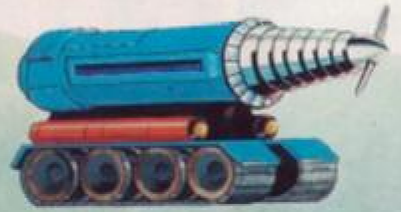
KEY

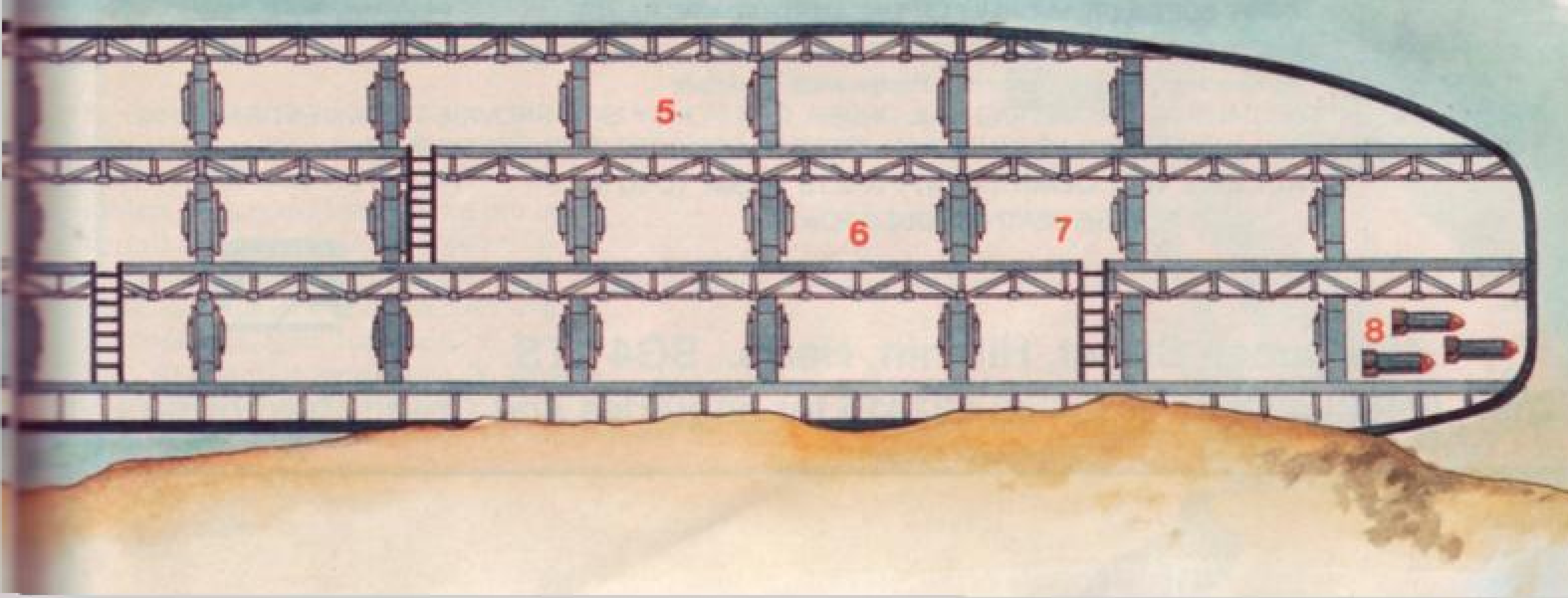
Mine Menace

1=The Control room, Alan's starting point
2=The Mole, Brain's starting point
3=Tool room, the compressed air drill
4=A ladder (used to cross the shaft) but it's only good for thrre trips
5=Stepping on these ladders causes them to break!
6=No lights
7=The mine car
8=Rockfall
9=Lift
10=Cable for compressed air drill
11=Compressor
12=Door
13=The trapped miners
14=Spanner
15=Hammer
16=Bucket lift
17=Plunger
18=Broken valve
19=Wire
20=No lights
21=Dynamite
22=Blocked by rocks.

TIPS

- Start each character with a torch and Alan must have the oilcan
- Use the grease gun to lubricate the wheels of the mine car.
- The fuses have to inserted to make the lift work.
- Connect the Drill, the Cable and the Compressor to drill through the door.
- Move Brains first as the cavern floods!
- Get the spanner, and the plunger (for the dynamtie) and go up to mend the broken valve to shut off the water.
- To use the bucket lift, hit it with the hammer. Use the wire, plunger and the dynamite to shift the rockfall.





DISCOUNT SOFTWARE

See our Mini Office prices

from M.J.C. SUPPLIES

DISC GAMES

3D Pool	11.95
Obliterator	11.95
Time and Magic	11.95
Lancelot	14.95
Xybots	12.95
Time Scanner	12.95
Renegade III	11.95
Running Man	11.95
Rick Dangerous	11.95
Thunderbirds	11.95
Indiana Jones	11.95
New Zealand Story	11.95
Passing Shot	11.95
A.P.B.	11.95
Skate or Die	11.95
Scape Ghost	14.95
The Tolkien Trilogy	11.95
Shinobi	11.95
Carrier Command	13.95

MJC SPECIAL:
Rock Star Ate My Hamster
RRP 14.95 OURS 9.95
OFFER ENDS 30th NOVEMBER

CORNIX SOFTWARE

CARD INDEX: Easy to use filing system **CASS:** 19.95 **DISC:** 24.95

SIMPLE ACCOUNTS: easy to use accounts ideal for small business includes VAT. **CASS:** 34.95 **DISC:** 39.95

JOB ESTIMATOR: useful tool for contractors. **DISC:** 39.95

PRODUCT COSTING: DISC:39.95 Full specifications on all of the above programs on request.

EDUCATION

Animal Veg, Mineral	11.95
Answerback Junior Quiz	11.95
Factfile Arithmetic	7.95
Factfile Spelling	7.95
Factfile Sports	7.95
Fun School for 2-5 years	7.95
Fun School for 5-8 years	7.95
Fun School for 8-12	7.95
Fun School 2 for under 6 yrs	9.95
Fun School 2 for 6-8 yrs	9.95
Fun School 2 for over 8 yrs	9.95
World Wise	11.95
German Master (12 to adult)	15.95
French Mistress (12 to adult)	15.95
Spanish Tutor (12 to adult)	15.95
Italian Tutor (12 to adult)	15.95

Note: Factfiles are question packs only and require the Answerback Junior Quiz.

DISC SERIOUS

Protext	**17.95**
Prospell	16.95
Promerge	16.95
Arnor Filer	18.95
Arnor Office Suite	26.95
Tasword 6128	**19.50**
Taspell	12.95
Tasprint	10.95
Tascopy	10.95
Tasdiary	10.95
Tassign 6128	23.95
Qualitas Plus version 2	**14.95**
Qualitas Font Library	11.95
Qualitas CPM + Utilities Disk	8.95
French Mistress	**15.95**
German Master	15.95
Spanish Tutor	15.95
Italian Tutor	15.95
Masterfile III Database	**29.95**
Mastercalc 128	25.95
Matrix Spreadsheet Plus	29.95
Stop Press Desktop Publishing	34.95
Extra Extra	19.95
Maxam (Assembler/Diss)	18.95
Poke Easy Plus	14.95
Mini Office II	**13.95**
Rodos Extra Disk	8.95
Advanced Art Studio	19.95
Stockmarket	25.95

CPM BASED

At Last Plus	29.95
Supercalc 2	44.95
Arnor C Compiler	39.95
Maxam II	39.95
Fortran	39.95
Nevada Cobol	39.95
Hisoft Devpac 80	39.95
Hisoft Pascal 80	39.95
Hisoft C Compiler	39.95
Iankey 2 Finger Typing	19.95
Iankey Crash Course	19.95

MJC SPECIAL
Protext CPM: including
Spellchecker & Mailmerge
RRP £59.95 OURS £39.95

CASSETTE BASED

Mini Office II	**9.95**
Maxam 464	15.95
Protext 464	15.95
Tasword 464	15.95
Answerback JNR Quiz	8.95

ACCESSORIES

Advanced Art Studio + AMX Mouse	49.95
AMX Mouse + Interface	Only 34.95
Printer Lead 1M	8.95
Printer Lead 1.5M	9.95
Printer Lead 2.0M	10.95
3" Disc Cleaner	6.95
Amstrad R232 Interface	55.95
Mono Screen filter	12.95
Colour Screen Filter	14.95
Comp Pro 5000 joystick	13.95
Quickshot Turbo joystick	9.95
Cruiser joystick	9.95
464 Monitor ext Leads	6.95
6128 Monitor ext Leads	7.95
1000 Fanfold Labels	6.95
Second Drive Lead	7.95
AMX Mouse + Art Software	59.95
AMX Mouse + Stop Press	64.95
464 Dust Cover (mono/col)	7.95
6128 Dust Cover (mono/col)	7.95
KDS 5 1/4" 800K disc drive (state 464/6128)	159.95
KDS 8 Bit Printer Port	18.95
DKT 64K Memory Expansion	45.95

RIBBONS

Printer	Quantity 1	2	5
DMP 2000/2160	3.50	6.00	14.00
Panasonic 1080/1081	3.95	7.00	16.00
Citizen 120D	3.95	7.00	15.00
Star LC10 (Black)	3.95	7.00	15.00
Micro-P165/200	4.95	8.00	18.00
Star LC10 Colour	5.95	11.00	–

CF2 Disc (Amsoft/Maxell) 10 for £25.95

PLEASE CALL FOR AVAILABILITY

BOOKS/MANUALS

Adv Amstrad Graphics	7.95
Mastering Machine Code	8.95
Programming the Z80	19.95

ROM BASED

Protext	**27.95**
Prospell	22.95
Promerge +	23.95
Maxam	**27.95**
Maxam 1.5	20.95
Utopia	20.95
BCPL	21.95
Rodos	28.95
Cage Rom (state which I/Face)	31.95
Rombo (if purchased with Rom)	28.95
KDS Rom Board (Holds 6)	24.95

**ALL ABOVE PRICES INCLUDE VAT, POSTAGE & PACKING IN THE U.K.
THE ABOVE SOFTWARE IS ONLY FOR THE AMSTRAD CPC RANGE**

Quali Pack Version 2

The Print Enhancement Package
New Qualitas Plus version 2
KDS 8 Bit Printer Port
R.R.P £36.90
Package Price £34.95

Quali Pack Extra Version 2

As above plus *new* Qualitas font library
R.R.P £51.85
Package Price £44.50

PRINT COLOUR GRAPHICS

At last it is possible to get colour screen dumps from a 6128!

COLOUR DUMP 2 is available exclusively from M.J.C Supplies and will take a standard screen file from **Advanced Art Studio** or created with **AMX Art**, and print it out in full colour on a **Star LC10** colour printer. You choose which colours on paper, represent which inks on screen for total control and variation. Also works on Epson compatibles inc. **DMP 2000/2160** with coloured ribbons.

COLOUR DUMP 2 – £12.95
ADVANCED ART STUDIO – £19.95
STAR LC-10 COLOUR – £239.95

PRINTERS

All printers listed have a ten inch (A4) carriage, are Epson compatible, and feature friction and tractor feed mechanisms for continuous or single sheet paper. All prices include the necessary cable

CITIZEN 120-D
Cheap Epson FX-80 compatible giving a range of text sizes and effects in draft mode. Limited sizes and effects in NLQ
£139.95

PANASONIC KXP - 1081
Offers all the draft mode text sizes of the D.M.P. 2160, but is better built, more reliable, and offers N.L.Q. in all sizes and effects, for only £10.00 extra! Highly recommended.
£159.95

STAR LC-10
As well built and reliable as the Panasonic. Has four N.L.Q. fonts (typefaces), in combination with all sizes and effects. New low prices makes it well worth considering
£179.95

STAR LC-10 COLOUR
All the features of the LC-10, but with a seven colour option for colourful text. If you want colour graphics please call first for advice.
£239.95

STAR LC 24-10
24 pin version of the LC-10. Has 5 excellent letter quality fonts available with all sizes and effects. Two extra effect, outline and shadow are also featured. Good value.
£269.95

Overseas Orders Welcome - Please write for details

WE ARE NOW IN OUR FIFTH YEAR OF SPECIALISING IN AMSTRAD MAIL ORDER, OUR POLICY IS TO PROVIDE THE WIDEST RANGE AT DISCOUNT PRICES WITH A FAST TURN AROUND TIME - TRY OUR SERVICES WITH CONFIDENCE

CALLERS WELCOME: Mon-Fri 9 to 5 Sat 10 to 4

PLEASE SEND CHEQUES/POs TO:

VISA

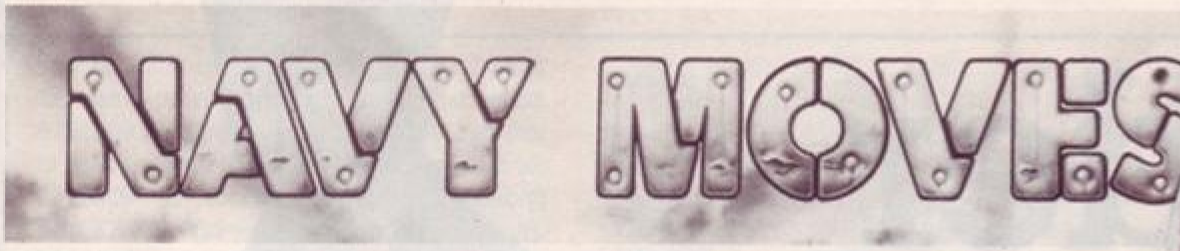
M.J.C SUPPLIES, (AA)

Access

40a Queen Street, Hitchin, Herts. SG4 9TS.

Tel: (0462) 432897, (0462) 420847 or (0462) 421415 for enquiries and Credit Card orders

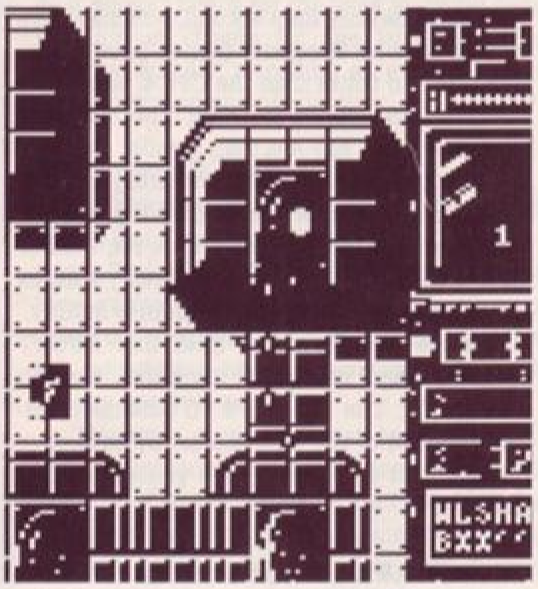
Proprietor M J Cooper





Electronic Arts' nautical sink-em-up getting you down? This wonderful poke from Graham Smith should sort you out, with infinite lives and ammo...

```
1 ' Navy Moves  -tape-
2 ' By Graham Smith
3 ' Infinite lives both parts
4 ' Infinite ammo part II
5 ' Method 1
6 '
10 FOR j=0 TO 51:READ a$
20 x=VAL("&"+a$):y=y+x
30 POKE j+48640,x:NEXT j
40 IF y<> 5424 GOTO 170
50 OPENOUT"c":MEMORY 999
60 CLOSEOUT:LOAD"c"
70 MODE 0:CALL 48657
80 DATA af,32,db,79,c3,00
90 DATA c0,af,32,d2,79,32
100 DATA 11,82,c3,b6,75,3a
110 DATA 97,04,fe,c3,28,08
120 DATA 3e,be,32,8c,04,c3
130 DATA e8,03,21,07,be,22
140 DATA 98,04,01,90,01,11
150 DATA 58,02,21,e8,03,ed
160 DATA b0,c3,58,02
170 PRINT"DATA ERROR
```



Xenon

Do you find *Xenon* tiring? Need more energy? Then fret no more, as **Phil Howard of Maperley** gives you infinite energy for Virgin's space age shoot-em-up. **Tape Method 1**

```
1 ' XENON - tape
2 ' Amstrad Action Dec '89
3 ' INFINITE ENERGY
4 ' by Phil Howard
10 DATA 21,49,00,22,c9,03
20 DATA c3,84,03,3e,c9,32
30 DATA 0b,08,c3,78,05
40 FOR x=&40 TO &50
50 READ a$
60 POKE x,VAL("&"+a$)
70 NEXT:MODE 1
80 OPENOUT "W":MEMORY &350
90 LOAD"xenon"
100 CALL &40
```





Enjoy *Renegade III* but can't be bothered to fight your way through all those levels every time? **Anthony Bailes of West Rainton** has the solution for jumping levels. When you get to the first menu, press Q and T together (do it a few times to make sure) and then start the game. Once the level is loaded press Q and T simultaneously again and you go to the next level! All a lot more friendly than the traditional way, don't you think?

Insider dealing



PHIL HOWARD tells you how to make your CPC look like a Spectrum (the swine), waxes lyrical about protection rackets (the dog) and explains a few hacking terms for the uninitiated (oh well, maybe he's not so bad)...

Don't you just hate those people who are always slagging off everyone else's computer, insisting that theirs is best? Personally, I think that the Spectrum is a great little machine (*oi, wash your mouth out! – ed*), which, in its day, must have been as near to the cutting edge of technology as Sliced Bread or Madame la Guillotine are today, and probably as popular.

However, any self respecting CPC owner, with the opportunity to eat cake, so to speak, would be loath to transform their lovely and colourful display into the postage stamp boasted by the Speccy (*that's more like it – ed*). But, as always, the programming fraternity, in their constant quest for a fast buck, on occasion take raw Spectrum code (which is also Z80-based), make a few minor modifications, and dump it direct into the CPC. And then publicising a new title for the Amstrad, but failing to mention it was carbon copied from a less than "state-of-the-art" original.

The most significant alteration they need to make is to the actual size of the display area, shrinking the CPC's glorious 40 x 25 character screen down so that it can accommodate the Spectrums more modest 32 x 24. The easiest way to achieve this is to reconfigure the hardware by altering data in the chip that controls the display – the Cathode Ray Tube Controller.

The CRTC has 16 registers which are set up when the machine is switched on. Each holds some information on the screen display. There are four that are of interest here:

No.1 – No. of Characters Horizontal
No.2 – Display Position Horizontal
No.6 – No. of Characters Vertical
No.7 – Display Position Vertical

The method of alteration is, once again using OUT instructions, to tell the chip which register needs changing on Port & BC00, and then sending the new data on Port & BD00.

Not only can you create a copy of the Spectrum screen in this way but also the tall thin screens used in games like *Moon Cresta* and *Gothik*. One point to note, however, is that if you change the size of the screen the computer's own display software will not be able to cope, as it still "thinks" in 40 x 25 and insists on using its full 16K quota of memory. Try the listing and see what happens.

```
BASIC listing SPECSCRN

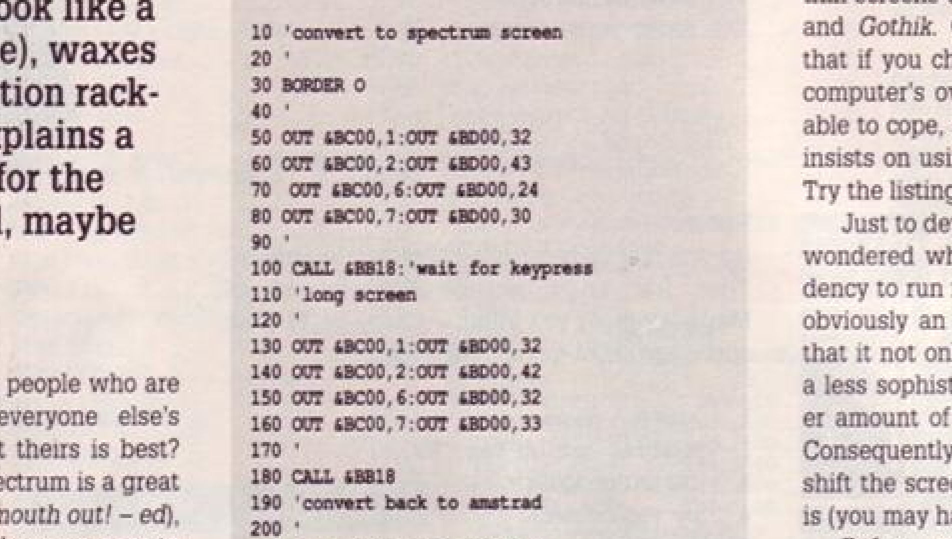
10 'convert to spectrum screen
20 '
30 BORDER 0
40 '
50 OUT &BC00,1:OUT &BD00,32
60 OUT &BC00,2:OUT &BD00,43
70  OUT &BC00,6:OUT &BD00,24
80 OUT &BC00,7:OUT &BD00,30
90 '
100 CALL &BB18:'wait for keypress
110 'long screen
120 '
130 OUT &BC00,1:OUT &BD00,32
140 OUT &BC00,2:OUT &BD00,42
150 OUT &BC00,6:OUT &BD00,32
160 OUT &BC00,7:OUT &BD00,33
170 '
180 CALL &BB18
190 'convert back to amstrad
200 '
210 OUT &BC00,1:OUT &BD00,40
220 OUT &BC00,2:OUT &BD00,46
230 OUT &BC00,6:OUT &BD00,25
240 OUT &BC00,7:OUT &BD00,32
```

● 1) Basic listing SPECSCRN. This program alters the size of display on the TV screen to Spectrum size (see what you're missing!) then to size used on *Moon Cresta* then back to CPC.

Just to deviate for a second, you may have wondered why Spectrum games have a tendency to run faster than the CPC's, when it is obviously an inferior machine. The reason is that it not only has a screen smaller, but also a less sophisticated design requiring a smaller amount of memory to display the colours. Consequently, the processor time required to shift the screen about is considerably less, as is (you may have noticed) the graphic quality.

Before we get away from this IN/OUT business, there is one last thing that is worth mentioning. The PPI chip's "C" channel contains control of the tape motor; by setting or resetting bit 4 of port &F600 you can turn it ON or OFF.

OUT &F600,&10 .. to turn motor on
OUT &F600,&00 .. to turn motor off



● Yes, you too can make your CPC look like a Spectrum... ugh!

It is often handy when looking through tape loader programs to know where the actual loading finishes. Normally the instruction OUT zero to port &F600 signifies the end of the load routine, that is where the tape turns off.

Increase your chances

You will have become used to the idea of searching a program for the location where the lives are reduced, this being the position in need of alteration. It's worth remembering that during a game lives can be not *only* reduced, but also increased. When a certain score is achieved or a special function fulfilled, extra lives may be awarded.

Should the on-screen representation be *numeric*, the chances are that the programmer will have only allowed one character space for display; this means that the lives can't be allowed to go above nine. In reality it's not very likely that this will happen any-

way but, just in case, the program will need to make provision for it. The instruction &FE,&09 (Compare what's in the "A" register to &09) is likely to be the check. A search for &FE,&09 in conjunction with (probably) &3A,XX,XX (ld A,lives), &3C (inc A), &32,XX,XX (ld lives,A), will give you the memory location where the lives are stored. It's then fairly straightforward to find where they are decreased.

This method can also sometimes be used on games which show a *graphic* representation of the number of lives left. You can often tell how much space is allocated and deduce the maximum allowed, then instead of searching for &FE,&09 you look for the maximum graphic positions. In *Thunderblade*, for instance, the game provides space for a maximum of 5. Searching for &FE,&05 turns up the location where the lives are increased, indicating that they are stored at &0097. A second search for this location finds the place they are reduced – &11A2.

This game is slightly unusual in as much as it doesn't check for the lives reaching zero, but instead checks for one less than zero (&FF) at &11AD, providing an extra life, 6 in all (5 on-screen and one in play).

```
THUN-DEC

1196 3E 07                LD   A,7
1198 32 04 E1             LD   (0E104H),A
119B 76                   HALT
119C CD 00 E1             CALL 0E100H
119F 3A 97 00             LD   A,(0097H)
11A2 D6 01         -->    SUB  1
11A4 32 97 00             LD   (0097H),A
11A7 CD 9A 2D             CALL 2D9AH
11AA 3A 97 00             LD   A,(0097H)
11AD FE FF                CP   0FFH
11AF C2 B2 06             JP   NZ,06B2H
11B2 DD 36 0B FF          LD   (IX+0BH),0FFH
11B6 DD 36 06 FF          LD   (IX+6),0FFH
11BA C3 B2 06             JP   06B2H
```

● 3) Disassembled listing THUN-DEC. at &1196. From *Thunderblade*. References to &0097 find where the lives decrease at &11A2 (sub 1). The program checks for &FF to see if they have run out at &11AD.

```
THUN-INC

2F5B 34                          INC  (HL)
2F5C 7E                          LD   A,(HL)
2F5D FE 27                       CP   27H
2F5F 38 02                       JR   C,L2F63
2F61 36 63                       LD   (HL),63H
2F63 3A 97 00       L2F63:       LD   A,(0097H)
2F66 FE 05          -->          CP   5
2F68 30 07                       JR   NC,L2F71
2F6A 3C                          INC  A
2F6B 32 97 00                    LD   (0097H),A
2F6E CD 9A 2D                    CALL 2D9AH
2F71 11 1E 44       L2F71:       LD   DE,441EH
2F74 21 B5 EC                    LD   HL,0ECB5H
2F77 C3 80 2D                    JP   2D80H
```

● 2) Disassembled listing THUN-INC. at &2F5B. From *Thunderblade*. Check for maximum of 5 lives at &2F66. If less, then increase at &2F6A. Lives are stored at &0097.

They seek it here...

For Protection watchers amongst you, it seems like a long time since Ocean/Imagine modified the speedlock on its tape games. The last thing, as I recall, was when the programmers changed the length of the information block, wreaking havoc with copiers everywhere.

This time, it seems Ocean has tried a different approach and planted something evil within the protection loops that disables the disk system – which, surprisingly enough, survives a soft reset. It's quite a shock after getting used to patching &BD16 to find that the dirty has already been done, and just as the new copyright laws come into force too... Are they really this clever?

I've only come across this on one game so far – *Red Heat* – but it occurs to me that this may be aimed at the Multiface copiers and, if that's the case, then it's not only a pretty neat idea, but it may stop Black Box copying stone dead. So be prepared for dormant disk drives.



It's normal in this pre-festive season to find a new wave of protection washing over the Christmas games. If this is it, then I'm pleased they've targeted the copiers, not us.

A frog's legacy

I've been messing around with a tape protection on Ere Informatique's *Bubble Ghost* of late, thinking that it was a new system. I find that the company has been using it on disk games for a quite a while (*Prohibition* and *Purple Saturn Day*). Not getting the chance to see many of Ere games it's new to me, and it turns out to be quite a stinker. Ere has always gone in for complex systems, which breaks with the British tradition. Even back in the days of *Get Dexter*, when we were still playing about with the ghastly Lens Lock, Ere produced a system of awful proportions that was very nearly the best I've ever seen. Shame they only used it the once.

Anyway, the new one makes a pleasant diversion from the same old Imagine / Ocean / US Gold protections, and is worth an afternoon of anybody's time. It's almost better than the game itself, but then I suppose I'm biased. If you're interested, have a look at the hardware interrupt system at & 38.

A NUMBER OF THINGS

I've had a short note from Peter Hall of Basildon who says that although he thinks that there are many people who are interested in finding out about poking games, there are also a lot of newcomers who need more basic information and that an explanation of some of the "computer talk" would be helpful. I'm sure he is right, so the following may help to rectify the situation a little.

Firstly, there are three types of numbering system used within the computer,

- Decimal, which *we* are used to, because we have ten fingers
- Binary, which the computer uses at its lowest levels because it only has 2 fingers (electrically On and Off)
- Hexadecimal, which is a half-way system based on the number 16 – used because it is compatible with binary, and *almost* sensible to us.

Once again, all types are catered for in Locomotive BASIC. If you have some spare time (has anyone?), it's worthwhile using the computer to convert numbers from one system to another, just to get used to the differences. A convention used by the CPC when using hexadecimal numbers is to precede them with a "&" as an indicator. Some disassemblers use an "H", some listings use a "#" (hash). You will notice that hexadecimal numbers not only consist of the numbers 0-9 but also the LETTERS A-F, this enables the system to keep all numbers (0-15) as single characters 0-F.

Everything you see and hear from the computer, from the motorbikes racing past in *Renegade* to the 3D manipulations of *Driller* to the musical wizardry of *Zynaps*, are all created from a bunch of numbers in the range 0-255 (&00-&FF). There is nothing else. It is the machine's interpretation and the sequence they are arranged in that creates the illusion. So, in machine code terms, don't expect to find a ready-made instruction like "Move the motorbike", "Play the tune" etc. Each pixel, each calculation, and each note must be individually manufactured and controlled.

The tape or disk on which you buy the program is only a storage medium.

- Loading a game takes the information stored on the disk/tape byte by byte and changes the memory of the computer to match. It is in fact copying (am I allowed to say that?) the game into the computer's memory, where the program eventually runs. Once the game has loaded, the tape/disk is no longer used and it can be removed altogether.
- What a POKE does is to alter the computer's memory once the program has been loaded in, thus changing the way the game plays. There is *no way* that by poking a game you can alter the information that is stored on tape, and, if a poke doesn't run as it should, no damage will result. Simply switch off and start again.

Game tapes are always write protected (the tab at the back is poked out), and it is virtually impossible to overwrite or modify the stored program.

In the same way, disks are usually write-protected. If this is the case then no damage can arise. There have been pokes in the past, however, which have required removing the write-protect and changing the data on the disk. If you doubtful (as I am) about this,*don't* try the poke. If you make a mistake, or the poke is wrong, the entire game may be ruined.

Leave the write protect *on* and you will not change the stored information.

AA Buyers Guide

This is the place to find what software and hardware is available for your CPC. We list programs by category, and provide producer; phone number; price; issue in which the item was reviewed; and last but not least, a brief description of the program's features and, where appropriate, shortcomings.

But don't take our word for it: if you're in doubt read the original review before you splash out, and make sure by asking the person you're buying from that it meets your particular needs. Best of all is a try-out, if you can find a friend who has what you're thinking of buying.

WORD PROCESSING

Brunword 6128

Brunning Software ☎ 0245 252854
£16.50 tape, £25 disk ● *AA24*
40 or 80 column mode; spell checker loaded into extra memory. Suitable for expanded 128K machines. Superscript/subscript effects on-screen. Includes Datafile. Available as "Junior Brunword" at £12.95 in slightly cut-down version.

Pendown

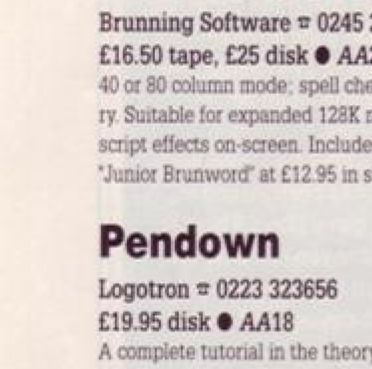
Logotron ☎ 0223 323656
£19.95 disk ● *AA18*
A complete tutorial in the theory and practice of word processing – it's great fun, too. Open system, owing much to expensive DTP packages.

Protext

Arnor ☎ 0733 68909
£19.95 tape, £26.95 disk, £39.95 ROM ● AA3
Lightning fast on all tasks involving screen. True merging from separate files and disks to the cursor position is easy, and *Protext* supports standard CPC RSX's like DISC, TAPE, CAT etc. ROM version is excellent. Bad points: maximum file space limited to machine memory – about 22K on disk, 38K for the ROM version. As used by *AA*, if that's any recommendation (don't answer that).

Mini Office II

Database Software ☎ 0625 878888
£14.95 tape, £19.95 disk ● *AA6*
If you don't need full specification *Mini Office II* isfor you. Remarkably cheap for word-processor, database and spreadsheet, plus comms software and more. Packaging and documentation is good, and programs work in a menu environment.



Pyraword

Discovery ☎ 0742 753423
£14.95 tape, £17.95 disk ● *AA18*
Similar in use to Discovery's *Pyradev*. It loads a profile of inks, printer codes and character set. Word counting, changing disk drives etc – "housekeeping" tasks – are handily located. Uses extra memory of 128K machines for spooling printed documents and storing text. True file merging is impossible, and control keys are odd. Margins cannot be set further apart than 80 columns, although placing a printer control character at the right hand side allows wider documents to be printed.



Tasword

Tasman Software ☎ 0532 4388301
464, 464D, 6128, £19.95 tape, £24.95 disk ● *AA1*
464 is the tape based version (the same as *Amsword*). 464D has enhancements for a disk drive. 6128 makes full use of a 6128's extra memory. The latter pair include mailmerge facility. Easy to get to know: comprehensive help screens. Screen operations are slow, but may be customised for greater speed.

Wordstar

Micropro/Cumana ☎ 0483 571666
£49.95 disk (CPM) ● *AA1*
Files can be as big as the space available. A professional program, with huge manual and a layout like mission control. If you want a function, it is in there... somewhere. Not fast.

PRINTERS

Manufacturers' recommended retail prices are listed as guidelines, but heavy discounts are offered by retailers.

Amstrad DMP/2160

☎ 0279 454555
£149 including VAT ● *AA6*
Load through front: printer must be above paper; but loading continuous stationery is easy. Poor NLQ mode. £5 for ribbons. Low priced, rather than a bargain.

Amstrad DMP3160

☎ 0279 454555
£199 + VAT ● *AA29*
Similar to but faster than DMP2160. Accepts all IBM and Epson printing codes. NLQ is front loading system. Good buy.

Amstrad DMP4000

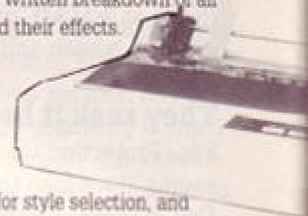
☎ 0279 454555
£349 + VAT ● *AA20*
A real text cruncher. Wide carriage, and really flies across the paper, up to about 200 cps (in NLQ about 50 cps). Fonts available: standard 9 pin Pica, Elite, condensed etc. – but they are different, rather than just adjusted spacing for the same characters.

Amstrad LQ3500

☎ 0279 454555
£349 + VAT ● AA31
Cheapest 24-pin printer. Paper loaded from the rear – more time consuming. 30 cps in letter quality mode, and 62 cps in draft. Print quality excellent: plenty of different type-styles built in. Not ultra fast.

Citizen 120D

☎ 0800 282692
£199 + VAT ● *AA43*
Dimensions: 3.7 kgs, and 370mm x 90mm x 238mm. Draft quality is 'dotty,' and poor, but NLQ is sharp and simple. A quiet beast, with cable to the computer connected on the side. Manual includes a complete written breakdown of all the printer control commands, and their effects.



Epson LX800

☎ 01 902 8892
£279 + VAT ● AA29
Very fast for 9 pin. Control panel for style selection, and Epson compatible. Reverse winding sheets requires care, though.

Epson EX800

☎ 01 902 8892
£629 + VAT ● *AA29*
Upgradable in 101 ways – cut sheet feeds, serial ports, longer life ribbons. Quiet, with respectable printing speed. Sans Serif/Roman NLQ fonts incorporated. Control panel to select fonts – just the same font with different spacings.

Epson LQ500

☎ 01 902 8892
£399 + VAT ● *AA29*
Features galore and price to match. Handles both Sans Serif and Roman styles of NLQ, for instance. Colour-printing upgrade kit available. 24 pin printer, offering excellent quality printing. Control panel to select from many available fonts (ie. the same font at different widths).

Panasonic KXP3131U

☎ 0753 73181
£335.25 (discont.) ● *AA29*
Daisywheel therefore superb quality – but can't print bit graphics (no trendy screen dumps), and if you want different fonts, you have to plug in a different Diablo-compatible one. Not quiet.

Mannesmann Tally MT81

☎ 0734 788711
£149 + VAT ● *AA43*
Dimensions: 70mm x 100mm x 265mm; weight, 4.5 kgs. Prints Epson and IBM graphics. Draft mode print quality is good: square printhead pins put ink onto greater areas. The printed output is more ornate than the Citizen. Manual is superb, but falls down in failing to explain control codes: for that you have to buy the applications manual. Certainly a very good buy.

Panasonic KXP1081

☎ 0753 73181
£219 +VAT ● AA29
Similar to DMP2000/2160: chunky, 9 pins, 10 inch carriage and compatible with Epson codes. Thorough A4 manual, good NLQ mode – better than DMP – and condensed, draft and NLQ modes.

Star LC 24-10

☎ 01 840 1800
£399 + VAT ● AA47
A low-cost 24 pin, 10 inch, 80 column Letter Quality printer: 8 resident fonts, all operable from the front control panel and 3 print variations. See the review in this issue, page 22.



Star LC-10

☎ 0494 471111
£199/£259 + VAT rrp ● AA32
First price is for standard dot matrix printer. Fonts selected by button, rather than typing in fiddly control code. Second price is for relatively inexpensive colour model. Uses multi-colour ribbon to produce different mixes, though there are currently no commercial programs to take advantage of this capability *(but see the Colourdump review in AA46, page 24).*

■ INTEGRATED PACKAGES

Protext

Arnor ☎ 0733 68909
£19.95 tape, £26.95 disk, £39.95 ROM ● AA3
Lightning fast on all tasks involving screen. True merging from separate files and disks to the cursor position is easy.

Mini Office II

Database ☎ 0625 878888
£14.95 tape, £19.95 disk ● *AA6*
Astonishingly cheap word processor, database, spreadsheet, graphics, comms and label printer all-in-one, it's continued to sell, and sell, and sell... Not full specification, but at this price who's complaining?



Protext Filer/Office

Arnor ☎ 0733 68909
£24.95/£34.95 disk ● *AA34*
Database that works comfortably with *Protext*, has powerful sorting options and comprehensive invoice printer. Can be slow, but good value.

■ EDUCATIONAL PROGRAMS

Amstrad Selection

Fernleaf Education ☎ 0474 359037
£25.95 disk/tape ● *AA32*
For age range 7 to 12+: Eightprograms – including*Fletcher's Castle, Market Stall, The Perfume Hunter, The Raiders, Ferry Captain, Treasure,* and *Thorn Sea.*

Arc Master Pack Plus

Arc Education ☎ 0472 812226
£48 disk ● *AA32*
A massive pack of 70 programs: Junior; Primary; a parent/child adventure; DR Logo and word games. Each set available at £9 tape and £12 disk. Well presented with good graphics, reasonable musical ditties and plenty of options.

Kosmos

Kosmos ☎ 05255 3942
£9.95 tape, £13.95 disk● *AA32*
Answer Back Junior Quiz lets you either answer the question; make a choice from a number of options; or say whether something is true or false. There's also *Factfile 500*, sets of additional questions for the program: arithmetic, spelling, sport and natural history.

The other range from Kosmos: vocabulary tutors in French, Spanish, German and Italian.

Funschool 2

Database Software ☎ 0625 878888
£9.95 tape, £14.95 disk● *AA43*
So rare is it that educational software gets into the charts that it made the news pages of the weekly computer press. Actually there are three great packages here: under sixes, six to eights and over eights.



Wordhang

Bourne Education ☎ 0794 523301
£9.95 tape; £14.95 disk ● *AA32*
One of Bourne's range of ten programs. Others include *Happy Letters, Numbers* and *Writing* (all Infant); *Timeman One/Two* and *Map Rally* (all Junior); and the excellent *Chemistry* and *Physics Revision* (Senior).

■ BUSINESS/ ACCOUNTS

● *See also* Pendown *in* 'Word Processing'

Protext Office

Arnor ☎ 0733 68909
£34.95 ● CPM+, 6128 only ● *AA34*
Requires *Protext* and *Promerge* to run. Information inputted using *Protext*. Mail merge templates included, and very well implemented invoice printing feature. A genuinely useful business system.

SD Microsystems range

SD Microsystems ☎ 0462 675106
General Ledger ● £19.95 ● *AA32*
Sales Invoicer Pack ● £19.95 ● *AA26*
Small Traders Pack ● £24.95 ● *AA26*
Stock Accounting System ● £39.95 ● 6128 only ● *AA32*
SD Microsystems have a range of quality small business systems. Consult original reviews for in-depth explanations of what each does and how it differs from the others – or better still, ring them and ask.

■ DATABASES

AtLast Plus

Rational Solutions ☎ 056681 511
£39.95 ● CPM+,128k machines only ● *AA30*
Powerful: developed into user's requirements. Data capacity restricted only by disk size, and splitting fields into smaller elements possible. Printed output impressive. Beefy processing.

Masterfile III

Campbell Systems ☎ 0378 77762
£39.95 CPM+ ● *AA30*
With parent/child records – enabling tying together of records, saving space and time. Screen layouts and reports menu selected; not for faint hearts, but good results.

Random Access Database

Minerva Systems ☎ 0392 437756
£29.95 disk ● *AA6*
40 or 80 column screen. Good mathematical and string operations . Random disk accessing gives speed and power.
● *See also* Info-Script *in* '4. Integrated Packages'

■ SPREADSHEETS

Mastercalc 128

Campbell Systems ☎ 0378 77762
£33 disk ● 128K machines ● *AA4*
Can show two parts of spreadsheet at once. Includes notepad and calculator. Easy to use, but the mathematical formulae can only consist of the four basic arithmetic options. Slows down as more data is entered.

Matrix

Audiogenic Software ☎ 01 861 1166
£34.95 disk ● *AA18*
Uses disk to store data – so good capacity on the plus side, but poor speed on the minus side. Graphic options excellent. Onscreen prompts rare, making it hard at first. Calculating power good.

Supercalc II

Amsoft/Sorcim ☎ 0277 230222
£49.95 CPM+ ● *AA4*
First class documentation. Calculations can be determinative – performed on whether or not cell's contents match given value. Excellent help prompts and arithmetic functions.

Cracker

Newstar Software ☎ 0277 229509
£49.00 disk CPM+ ● *AA9*
Spreadsheets must be created from scratch. Documentation good, command sequences soon learned. Mathematical functions well done, with random numbers catered for. Files limited to 17K – and formulae programming not well implemented.



SOUND

Amdrum

Cheetah ☎ 0222 555525
£34.95 ● *AA13*
Digital drum machine. Editor comprehensive. Not Midi compatible: to hear output you plug it into amplifier.

DHCP Midi Interface

DHCP ☎ 0440 61207
£69.95 interface, £34.95+ disk s'ware ● *AA33*
DHCP produce Midi software for various Midi interfaces for CPC, which are incompatible with each other.

Micro Music Creator

First Byte Software ☎ 0225 765086
£9.95 tape, £14.95 disk, £24.95 ROM ● *AA38*
A music composer that lets you put staves and notes onscreen and play tune back. Accents can't be inserted, though. Other side is sampler to capture sounds from tape and play them through CPC. Excellent.

Miditrack Performer

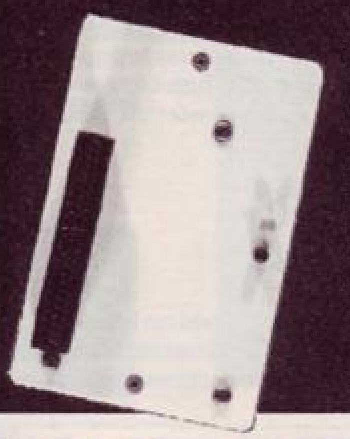
EMR ☎ 0702 335747
£49.95 interface, £79.90/£89.90 tape/disk s'ware● *AA13*
Midi interface plus sequencing software to drive Midi equipped instruments. Records each instrument then plays them all at once. Onscreen layout similar to multi-track recorder. Excellent.

Foundation Sequencer

Foundation Software ☎ 0252 543945
£34.95 ● *AA50*
Foundation's package is the only step-time sequencer you can get for the CPC.

Midi Interface

Silicon Systems ☎ 061 848 8959
£59.95 interface, £59.95 software ● *AA26*
Useless alone, but software you can use with it – DX7, FB01, MT32, D50 and CZ101 – is diverse. Software prices vary, and lack presentation of EMR sequencer. High performance.



Ram Music Machine

RAM Electronics (Datel) ☎ 0782 744707
£49.99 tape, £59.99 disk ● *AA17*
All in one music package: Midi interface, sound sampler and music editor. Sampler can handle one sample of just over a second. Midi controller software and music editor comprehensive. No through port, though, so 464 users must use tape version. And you can't edit live played Midi compositions.



Speech Synthesizer

DK'tronics (Datel) ☎ 0782 744707
£29.99 ROM
Add-on producing speech by RSX's: loudspeakers supplied. Cannot include speech in program for someone else's CPC, though. Even so, excellent speech quality and value.

VISION

AMX Art

Database ☎ 0625 878888
£69.95 disk (includes mouse) ● *AA7*
User friendly, if little unsophisticated compared to *Advanced Art Studio*, but mouse helps greatly. Colour, spraycans, textures, circles and host of other features.

Cherry Paint

Siren Software ☎ 061 228 1831
£9.99 disk ● *AA20*
WIMP controlled – ie mouse moves pointer to various icons to pull-down menus. B/W mode 2 only, but fun. Curves are difficult, but this is a bargain.

Advanced Art Studio

EEC ☎ 0753 888866
£24.95 disk ● *AA21*
Recently revitalised, this is *the* user-friendly, best and most powerful art package: works in all three modes. Can cycle through inks, and cut and paste different areas, transformations and reflections. Fill routines in coloured patterns. Available as a standard version for £15.95.



DART Scanner

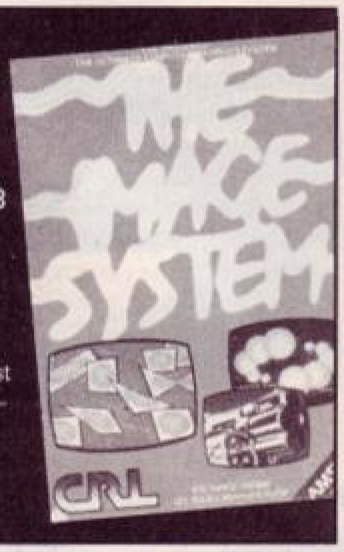
Dart Electronics ☎ 0502 513707
£79.95 ● *AA22*
Attach reading device to your DMP2000, 3000 or 3160. Feed in picture to printer: device reads in picture as B/W image. Quality onscreen isn't amazing, but it works and it's fun.

The Informer

Treasure Island Software ☎ 0492 593549
£29 disk ● *AA33*
For creating animated displays, suitable for classroom and shop window: takes text, graphics and animated displays and produces slide show. Works best but not only with *Parrotry Plus* (see below).

CRL Image System

CRL ☎ 01 533 2918
£14.95 disk/tape ● *AA12*
Boasts range of picture manipulations and distortions, but lacks art options. Best on finished pictures – like a mini Quantel box.

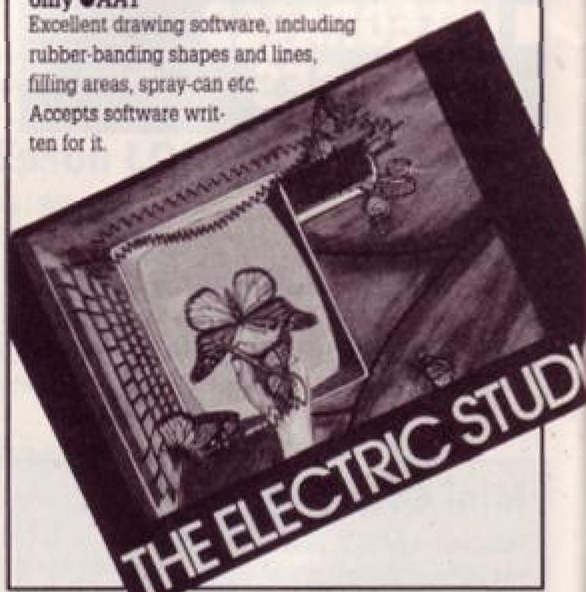


Parrotry Plus

Treasure Island Software ☎ 0492 593549
£19.95 disk ● *AA30*
Rather than lots of effects used anywhere and at any time, *Parrotry Plus* 'remembers' every alteration and plays through the list to create animation. Note: can't dump pictures to printer without external program.

Electric Studio Light Pen

Electric Studio ☎ 0462 420222
464D £24.99, £14.99 ROM ● 6128 £24.99 ROM only ●*AA1*
Excellent drawing software, including rubber-banding shapes and lines, filling areas, spray-can etc. Accepts software written for it.



Vidi Digitizer

Rombo Productions ☎ 0506 414631
£89.95 ● *AA15*
Grabs picture from video recorder or camera and puts it on CPC screen, allowing you to alter it with an package. Easy to use. Software on tape, disk or ROM includes superb printer dump routine.

● **Corrections, additions or ideas for sections to be included are welcome. Drop a line to: *AA Buyers, Amstrad Action*, 4 Queen St, Bath BA1 1EJ**

Don't miss it! AA52 will be out on Thursday 14th December – and what a corker it will be! Reserve your copy NOW.

AAfterthought

The page we slip in at the last minute when it's too late to stop us



Custom made

Just a word of thanks to *Custom Car*, on sale at all good newsagents etc, for lending us the hot Manta on the cover. It was great fun tearing up and down Queen Street, tyres smoking and... and... OK, it's true. No-one in their right minds would trust the *AA* team with a bicycle pump, let alone a 1900 bhp monster. Thanks for letting us use the pic, though, lads.

Brilliant new scheme!

Eagle-eyed readers will spot this month a *Type-Ins* section with a difference – they all work! No, actually, seriously now, we did have one or two problems last month, what with the irregular sunspot activity and the chip shop being shut for fumigation.

And we have had to turn a few type-ins down this month, unfortunately. There was that Macintosh emulator that unfortunately had an unexplained syntax error in line 40, for example, and the Intercity 125 simulator that never turned up. Worst of all though was Nigel Lawson's *Economic Planner*, which was five lines of BASIC he wanted £2,600 billion for...

Wot, no *First Edition* (or *Protext*)...?

Oh gosh, we don't know how to tell you this, but we've crammed so many goodies into this ish that there just wasn't room for everything and... yes... yes, Mr Angry... yes... yes, if you had your way... yes... all be fired, I know... yes... oh blimey.

To the newsagent: **Amstrad Action** *is distributed by COMAG*

Dear newsagent,
Please reserve me a copy of the December issue of *Amstrad Action*, due out on Thursday 9 November

Name:

Address:

Telephone number:
If you're under 16, please get your parent or guardian to sign here:



Cheats never prosper

Or at least they won't if they followed every word of last month's *Cheat Mode*. Or at least, every individual character. You see a teensy weensy little bugette meant that the memory address that read 0DB8 should *actually* have read 0D8B.

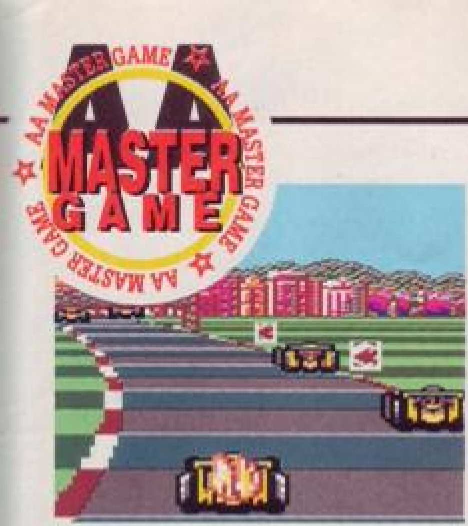
That oh-so-honest Phil Howard actually phoned in to tell us he blundered, so all you hackers out there who couldn't get their infinite lives on *Shinobi* now know why.

Advertisers Index

THE ACTION OFFERS

BUY PRODUCTS FROM YOUR FAVOURITE CPC MAGAZINE.

All the prices include postage, packing and VAT. You can trust us, we don't intend to leave the planet for quite some time!



CONTINENTAL CIRCUS
from Virgin

Race in the Brazilian Grand Prix. The best bit of driving on your CPC yet! With eight different tracks and no braking just push the accelarator as hard as you can!

CASSETTE RRP £9.99
AA PRICE £7.97
Order Code AA517AC

DISK RRP £14.99
AA PRICE £10.97
Order Code AA517AD

BUY SHINOBI AND CONTINENTAL CIRCUS TOGETHER AND SAVE UP TO 30%!

CASSETTE VERSIONS
RRP £19.98
AA PRICE £13.98
Order Code AA518AC

DISK VERSIONS
RRP £29.98
AA PRICE £19.98
Order Code AA 518AD



SHINOBI
from Virgin

Oriental fighting and magic, play the part of Shinobi in this action packed AA Rave. In addition to this save some hostages along the way and gain extra points, but be sure to keep yourself in one piece by being in the right place with the right weapon at the same time!

CASSETTE RRP £9.99
AA PRICE £7.97
Order Code AA519AC

DISK RRP £14.99
AA PRICE £10.97
Order Code AA519AD

CALL OUR HOTLINE ON 0458 74011 NOW OR SEE THE ORDER FORM ON PAGE 90

MICRO DESIGN
from Siren Software

A powerful design and artwork package that take you to a full A4 page.
Use for technical drawings or greetings cards, there are no limitations!
Lettering can be typed from the keyboard in one to four sizes and in any direction.

* Large selection of font styles
* Various shapes for boxing and shades, including ovals, triangles, diamonds and circles.



RRP £24.99
AA PRICE £17.99
SAVE £7.00!
(6128 or 464 with disk drive and ram expansion)
Order Code AA516

ALL OUR PRICES INCLUDE CARRIAGE AND VAT: THERE ARE NO HIDDEN EXTRAS!

SAVE £20!

CRACKER 2
from Paperback Software

(As featured in the AA Buyers Guide!)

One of the best selling spreadsheets on the market, and one of the very few for the 6128, it has loads of on-screen help and an excellent manual.

RRP £49.95
AA PRICE £29.95
Order Code AA402

LIMITED EDITION COLLECTION

For a limited period only we are offering the following two products to add to your *Amstrad Action* Designer Collection.

RED BINDER

This smart Red Binder with the Amstrad Action logo embossed in blue on the spine and front. Holds 12 issues safe and secure from prying eyes.

ONLY £4.95
Order Code AA417R
OR
£9.00 FOR TWO
Order Code AA4172R



RED T-SHIRT

A truly excellent red American T-Shirt with the official AA logo in three colours printed on the front. This summer wear yours with pride (and please the Ed!).

ONLY £4.99
Medium Order Code AA361R
Extra Large Order Code AA362R

OR
WHY NOT BUY TWO T-SHIRTS?
ONLY £9.00
(ONE in white and ONE in red, just quote the two relevant order codes!)



THE ACTION OFFERS



AA DUST COVERS

A set of dust covers provides a neat solution to dust, tea and other potential computer disasters.

These specially-commissioned Amstrad Action covers are made from high-quality, water (and coffee) proof PVC. They're coloured a gentle beige with smart blue trimming and matching AA logo. You can order a 2-piece set tailor-made for your CPC system – just choose the correct order code from the list below.

2-PIECE SET ONLY £6.95

Order Codes

464	mono - A208	colour - A209
664	mono - A210	colour - A211
6128	mono - A212	colour - A213

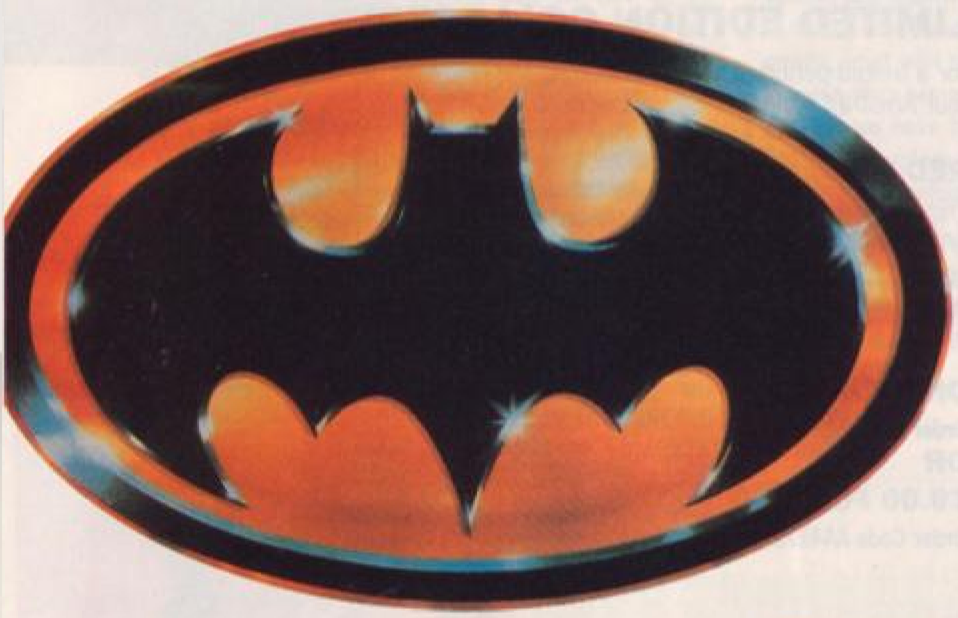
BATMAN

from Ocean

Batman, the only hope for the city of Gotham. He hunts the criminals to stamp out crime. Play the game from the blockbuster film, whilst driving the Batmobile and attempting to wipe out the Joker at the Axis Chemical Factory.

CASSETTE RRP £9.99
AA PRICE £6.99
Order Code AA520AC

DISK RRP £14.99
AA PRICE £9.99
Order Code AA520AD



CALL OUR HOTLINE ON 0458 74011 OR SEE THE ORDER FORM ON PAGE 90



POWER DRIFT

from Activision

Like no other racing game choose from twelve drivers, five courses and 27 circuits all with different conditions from snow to dry deserts.

CASSETTE RRP £9.99
AA PRICE £7.47
Order Code AA522AC

DISK RRP £14.99
AA PRICE £10.47
Order Code AA522AD



DYNAMITE DUX

from Activision

The cutest game around with boxing crocodiles and sumo pigs!
The two heroes of the game, Bin and Pin the darling dux are there to save the day and rescue Lucy from a dreadful fate.

CASSETTE RRP £9.99
AA PRICE £7.47
Order Code AA521AC

DISK RRP £14.99
AA PRICE £10.47
Order Code AA521AC



HIGHLIGHTER PENS

For bringing out those key phrases, there's nothing like these AA-embossed pens in red, yellow and green.

THREE FOR £1.50
Order Code AA266

THE ACTION OFFERS

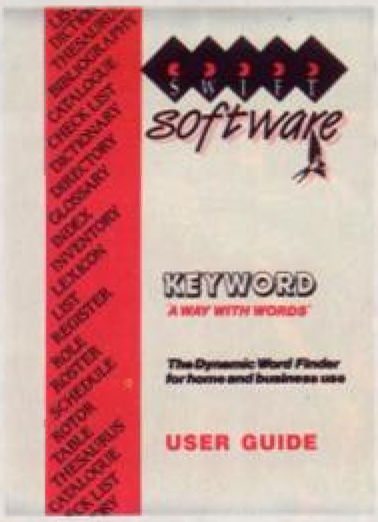


KEYWORD

from Swift Software

The dynamic word finder for home and business use.

It's so easy to use. Just type in a word and straight away you'll be offered a huge list of alternatives. Then, using just the mouse, you can select a word that's nearer to your requirement. Or if it's not quite what you're looking for, just click on Search to see another set, more closely related to the new word — and so on.



- Over 10,000 synonyms and antonyms
- Nearly 1,000 main subject headings
- Extra rapid word search
- Can be used as a Thesaurus
- Simple Operation

RRP £29.95

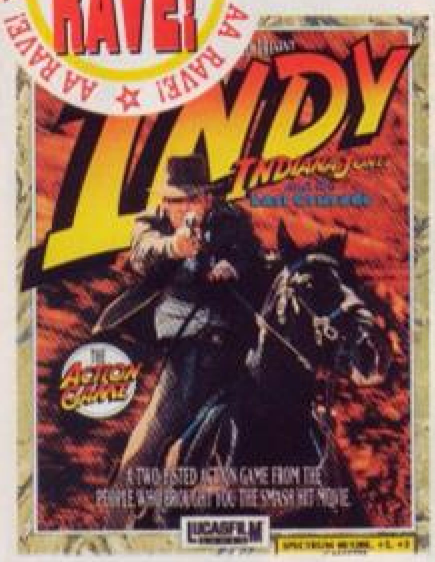
AA PRICE £19.95

Order Code AA515

(6128 or 464 with disk drive and upgrade)



INDIANA JONES AND THE LAST CRUSADE from US Gold



The man with the hat is back!
A classic two fisted arcade game played on four action packed levels. Whip the bad guys...as only Indy can! Includes a copy of the "Byzantine Crusader" which details the storyline and Hints and Tips is included in the software.

AMS CASS £9.99

AA PRICE £6.99

Order Code AA511

AMS DISK £14.99

AA PRICE £9.99

Order Code AA512



LASER SQUAD

from Bladesoft

A game of tactics and violence accurately simulating the one-to-one combat of rebel space marines. Superb flexibility and playability make this one of the most brilliant war games.

"Laser Squad will have any intelligent aggro freak coming back time and time again."
Trenton Webb **AA Issue 49**

AMS CASS £9.99

AA PRICE £6.99

Order Code AA513

AMS DISK £14.99

AA PRICE £9.99

Order Code AA514

STOP PRESS AND MOUSE

Desktop publishing — doing page design and printing on a computer instead of the old cut-and-paste and linotype printing method — is the boom area of low-cost computing. All the national dailies are switching over to DTP methods — and so are thousands of CPC users, to produce everything from newsletters to menus, from posters to invoices.

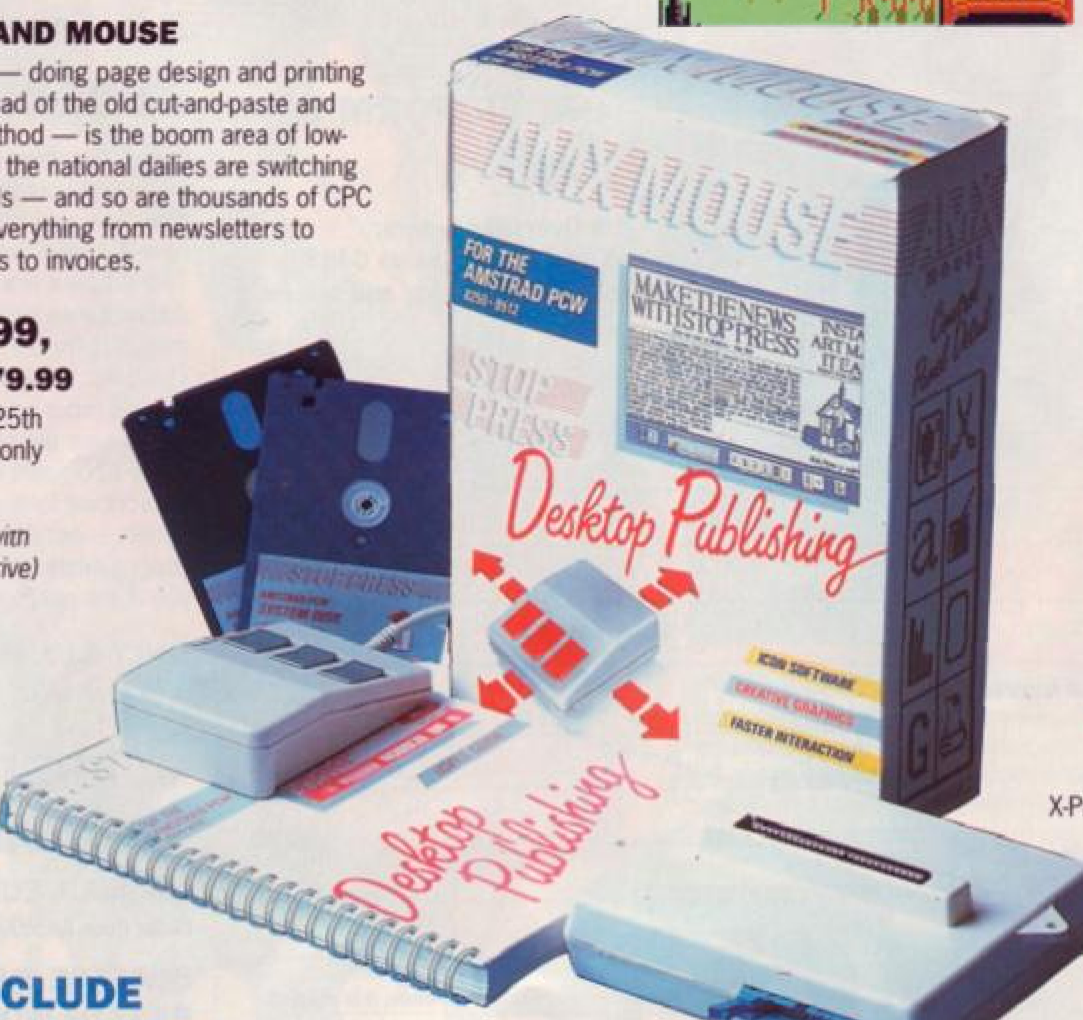
ONLY £64.99,

THE RRP IS £79.99

If you order before 25th September it is still only £49.95)

(CPC6128 or 464 with upgrade and disk drive)

Order Code AA605



SUBSCRIBE NOW! SEE PAGE 61 FOR SOME EXCELLENT REASONS WHY!



X-PRESS

from Medway/King

X-Press for owners and potential owners of Stop Press. There have always been limitations with programs running on the CPC machines, due to lack of memory. Now we can offer extra space and speed with this superb add-on package. **See full review, issue 48.**

AA PRICE ONLY £19.99

Order Code AA606

ALL OUR PRICES INCLUDE CARRIAGE AND VAT – THEY'RE THE CHEAPEST AROUND!

BACK ISSUES

If you're one of the thousands of readers who've joined Amstrad Action only recently, you'll want to catch up on some of the good things you've missed. Here's how to do it. We have limited numbers of the back issues listed below, which we're selling at cover price with post and packing free.

ISSUE 1-22 • SOLD OUT!

ISSUE 23 • £1.25
Launch of Word-Processing series. Utility Type-ins.

ISSUE 24 • £1.25
Two years of AA! Exolon. Word processors. Tas-Sign. More WIMPs.

ISSUE 25-28 • SOLD OUT!

ISSUE 29 • £1.25
Six top printers reviewed. Spreadsheets.

ISSUE 30–31 • SOLD OUT!

ISSUE 32 • £1.25
Educational software survey. CP/M on ROM. Word Processing

ISSUE 33 • SOLD OUT!

ISSUE 34 • £1.25
Simulation software from space shuttles to bike.

ISSUE 35 • SOLD OUT!

ISSUE 36 • £1.25
Micronet – worth it? Code Masters. Printer selection.

ISSUE 37-40 • SOLD OUT!

ISSUE 41 • £1.50
Databases for all, Hard drives, Pilgrim special, Batman, Jedi.

ISSUE 42 • £1.25
Wec Le Mans and Airbourne Ranger reviewed. How to write a best seller! Loads of Hot tips!!

ISSUE 43 • SOLD OUT!

ISSUE 44 • £1.25
Joystick Jury. Barbarians II. Professional music programmers interviewed.

ISSUE 45 • £1.25
DTP: a new, cheap package reviewed. Massive AA Soccer Spectacular. Guide to Midi Systems.

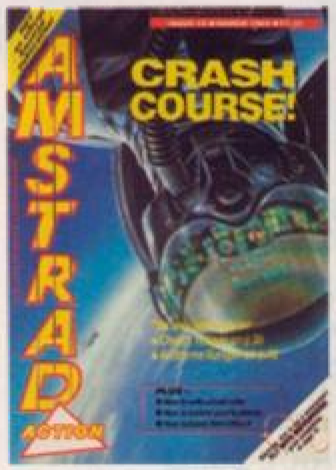
ISSUE 46 • £1.45
Forgotten Worlds and Stormlord, two brilliant games! Your best book guide. Whats really inside the CPC?

ISSUE 47 • £1.45
The Magnum lightgun on trial. How to write a best seller, the Pandora package examined for potential game programmers. The latest stock control update from SD Microsystems.

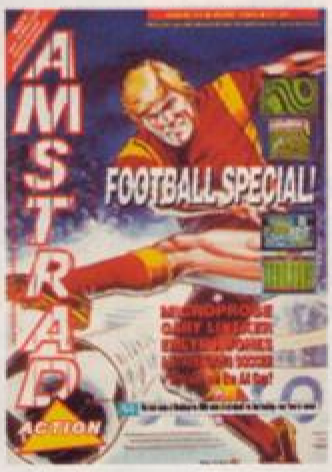
ISSUE 48. £1.45
DTP special, various add-ons reviewed in depth. Gemini Wing, Red Heat and Purple Saturn Day, all great games. How to create a magazine using your CPC.

Issue 49. £1.95
Cover Disk: See Shinobi, the latest mega fighting game from Virgin.
Daleks, classic CPC fun and Easisheet, a complete spreadsheet.
Magazine: Take a look at Laser Squad, Licence to kill and Indiana Jones, all winners and must for CPC owners. AA Fourth Birthday, join in the fun. Printers, should you choose this one from Mannesman Tally?

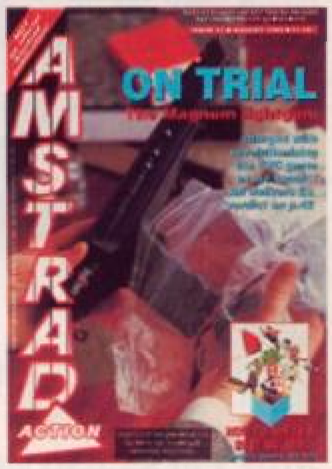
ISSUE 50 £1.45
The complete guide to MIDI music. The latest 3.5 inch disk drive from MGT. The latest games from Virgin.











THE ACTION OFFERS

ORDER FORM 51

• Overseas orders: Call Clare Bates on 0458 74011 for timing and prices.

CODE	DESCRIPTION	PRICE
	TOTAL PAYABLE	

Please send me the above item(s) from the Amstrad Action Special offer pages.

Make cheques & postal orders payable to FUTURE PUBLISHING LTD.
If paying by credit card,please enter details
CREDIT CARD NUMBER EXP. DATE

Method of payment (please circle)
ACCESS • VISA • CHEQUE • PO

Send this form plus payment to SPECIAL OFFERS, AMSTRAD ACTION, THE OLD BARN, SOMERTON, SOMERSET TA117PY

Name ____________

Address ____________

Please remember the post-code, it is essential!

Date of Order ____________

Tel Number (If possible) ____________

SUBSCRIPTIONS

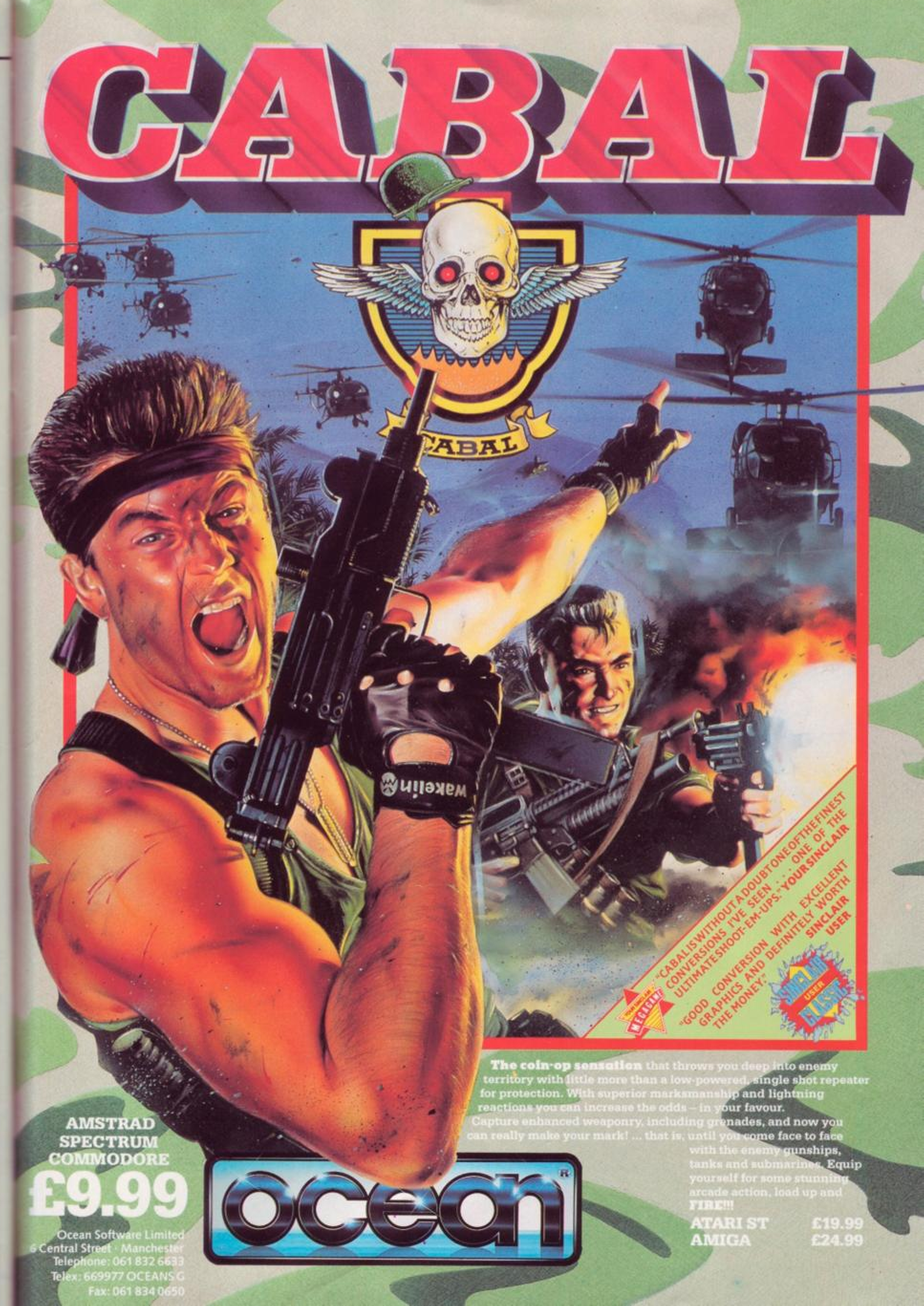
New subscribers welcome! As well as getting your 12 issues posted directly to you from the printers, we. have a unique Subscriber Scheme. This is how it works: immediately you subscribe we send you £20 worth of vouchers for our mail order section. This offer entitles you to a £20 saving on mail order products from these pages over the next 12 months. For every £10 spent you save £1. Plus by subscribing look out for our up-to-the-minute super duper exclusive AA Mail Order Update, which will be posted to you in the next few weeks.

ONLY £17.95
Order Code AA396

OVERSEAS SUBSCRIPTIONS

AIR-MAIL EUROPE £33.95
Order Code AA397

SURFACE EUROPE AND REST OF WORLD £23.50
Order.Code AA398


CABAL
CABAL
"CABAL IS WITHOUT A DOUBT ONE OF THE FINEST CONVERSIONS I'VE SEEN . . . ONE OF THE ULTIMATE SHOOT-EM-UPS." YOUR SINCLAIR
"GOOD CONVERSION WITH EXCELLENT GRAPHICS AND DEFINITELY WORTH THE MONEY." SINCLAIR USER
MEGAGAME
SINCLAIR USER CLASSIC
The coin-op sensation that throws you deep into enemy territory with little more than a low-powered, single shot repeater for protection. With superior marksmanship and lightning reactions you can increase the odds – in your favour. Capture enhanced weaponry, including grenades, and now you can really make your mark! ... that is, until you come face to face with the enemy gunships, tanks and submarines. Equip yourself for some stunning arcade action, load up and FIRE!!!
AMSTRAD
SPECTRUM
COMMODORE
£9.99
ATARI ST £19.99
AMIGA £24.99
ocean
Ocean Software Limited
6 Central Street · Manchester
Telephone: 061 832 6633
Telex: 669977 OCEANS G
Fax: 061 834 0650

A COMPILATION TO BEAT ALL COMPILATIONS

SEGA® **THUNDERBLADE™**

Hold on to your stomachs, unscramble your brains for the journey of a lifetime in the most advanced Helicopter gunship ever conceived.

L.E.D. STORM™ CAPCOM™

The road race game of the year, puts you in control of a high powered futuristic vehicle through nine fast, furious and hazardous stages.

ATARI® GAMES

MIRROR Soft **BLASTEROIDS™**

Battle your way through Sectors and Galaxies riddled with asteroids and deadly enemy ships.

INDIANA JONES™

Indy's quest is to recover the sacred and powerful SANKRA STONE and free the enslaved children of MAYA PORE. Only you can help him!

IMPOSSIBLE MISSION II™ EPYX®

One of Epyx's all time greats. The evil Elvin Atombender is back in power. Your mission – infiltrate and nutralize his five tower strongholds.



THE CHAMPION OF... ..GAMES COMPILATIONS

U.S. GOLD®

The greatest names with the greatest games together in one mind-blowing compilation so you can see why we've called it WINNERS.

CBM 64/128 SPECTRUM 48/128K & AMSTRAD
CASSETTE & DISK
AMIGA & ATARI ST (Excluding Temple of Doom)

"WINNERS DO IT FROM THE FRONT!"

U.S. Gold Ltd, Units 2/3 Holford Way, Holford, Birmingham B6 7AX. Tel: 021 625 3388.